OM protein - protein search, using sw model

Run on: February 21, 2006, 07:54:15 ; Search time 29.5 Seconds
(without alignments)
61.970 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	660	1	A28153	gelatinase A (EC 3
2	114	100.0	662	2	S70365	gelatinase A (EC 3
3	114	100.0	662	2	A42496	gelatinase A (EC 3
4	114	100.0	662	2	S34780	gelatinase A (EC 3
5	114	100.0	663	1	S46492	gelatinase A (EC 3
6	82	71.9	483	2	JC5743	matrix metalloprot
7	78	68.4	267	1	KCHUM	matrilysin (EC 3.4
8	72	63.2	471	2	A53711	collagenase 3 (EC
9	72	63.2	472	2	S29243	interstitial colla
10	69	60.5	466	2	A23685	interstitial colla
11	68	59.6	267	2	A57490	matrilysin (EC 3.4
12	67	58.8	377	2	T00643	zinc metalloprotei
13	66	57.9	475	1	KCRTIH	stromelysin 1 (EC
14	66	57.9	476	1	JC6505	stromelysin 2 (EC
15	66	57.9	476	1	KCHUS2	stromelysin 2 (EC
16	66	57.9	476	1	KCRTS2	stromelysin 2 (EC
17	66	57.9	477	1	KCMSS1	stromelysin 1 (EC
18	66	57.9	478	1	KCRBS1	stromelysin 1 (EC
19	63	55.3	477	1	KCHUS1	stromelysin 1 (EC
20	60.5	53.1	378	2	E96724	hypothetical prote
21	57	50.0	468	1	KCRBI	interstitial colla
22	57	50.0	469	1	KCPGI	interstitial colla
23	51	44.7	258	1	S36783	venombin A (EC 3.4
24	51	44.7	467	1	KCHUN	neutrophil collage
25	51	44.7	469	1	KCBOI	interstitial colla
26	50.5	44.3	635	2	T22321	hypothetical prote
27	50	43.9	470	2	A49499	metalloelastase HM
28	49.5	43.4	305	2	T08836	probable metallopr
29	49	43.0	469	1	KCHUI	interstitial colla
30	48	42.1	31	2	A23715	gelatinase (EC 3.4
31	48	42.1	462	2	A42401	macrophage elastas
32	48	42.1	707	1	A53796	gelatinase B (EC 3
33	48	42.1	708	2	JC4364	gelatinase B (EC 3
34	48	42.1	708	2	S62907	gelatinase B (EC 3
35	48	42.1	712	1	I46031	gelatinase B (EC 3
36	48	42.1	730	1	I52580	gelatinase B (EC 3
37	48	42.1	730	2	JC1456	gelatinase B (EC 3
38	47.5	41.7	341	2	T51957	metalloproteinase
39	47.5	41.7	342	2	G84885	probable metallopr
40	47	41.2	364	2	E71433	probable metallopr
41	47	41.2	521	2	T37252	probable matrix me
42	46	40.4	189	2	B29795	circumsporozoite p
43	46	40.4	256	2	C90443	hypothetical prote
44	46	40.4	577	2	T40380	major facilitator
45	45	39.5	110	2	S11786	nolE protein - Rhi

ALIGNMENTS

RESULT 1
A28153
gelatinase A (EC 3.4.24.24) precursor - human
N;Alternate names: collagenase type IV; matrix metalloproteinase 2 (MMP2); progelatinase
C;Species: Homo sapiens (man)
C;Date: 28-Aug-1989 #sequence_revision 07-Jul-1995 #text_change 09-Jul-2004
C;Accession: A28153; A34202; A42225; A60187; S13858; S39436; A31480; S44432; A61498; S55
R;Collier, I.E.; Wilhelm, S.M.; Eisen, A.Z.; Marmer, B.L.; Grant, G.A.; Seltzer, J.L.; K
J. Biol. Chem. 263, 6579-6587, 1988
A;Title: H-ras oncogene-transformed human bronchial epithelial cells (TBE-1) secrete a s
A;Reference number: A28153; MUID:88198218; PMID:2834383
A;Accession: A28153
A;Molecule type: mRNA
A;Residues: 30-660 <COL>
A;Cross-references: UNIPROT:P08253; UNIPARC:UPI0000172CE7; GB:J03210; NID:g180670; PIDN:
R;Huhtala, P.; Eddy, R.L.; Fan, Y.S.; Byers, M.G.; Shows, T.B.; Tryggvason, K.
Genomics 6, 554-559, 1990
A;Title: Completion of the primary structure of the human type IV collagenase preproenzy
A;Reference number: A34202; MUID:90228972; PMID:2158484
A;Accession: A34202
A;Molecule type: DNA
A;Residues: 1-51 <HU2>
A;Cross-references: UNIPARC:UPI000016A6E3; GB:M33789; NID:g180600; PIDN:AAA52027.1; PID:
R;Huhtala, P.; Chow, L.T.; Tryggvason, K.
J. Biol. Chem. 265, 11077-11082, 1990
A;Title: Structure of the human type IV collagenase gene.
A;Reference number: A42225; MUID:90293047; PMID:2162831
A;Accession: A42225
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-51;220-393 <HUH>
A;Cross-references: UNIPARC:UPI000016A6E3; UNIPARC:UPI0000172CE8; GB:M55593; GB:J05471;
A;Note: neither the complete amino acid nor the complete nucleotide sequence is given in
R;Frisch, S.M.; Reich, R.; Collier, I.E.; Genrich, L.T.; Martin, G.; Goldberg, G.I.
Oncogene 5, 75-83, 1990
A;Title: Adenovirus E1A represses protease gene expression and inhibits metastasis of hu
A;Reference number: A60187; MUID:90206614; PMID:2157183
A;Accession: A60187
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-58 <FRI>
A;Cross-references: UNIPARC:UPI0000172CE9
R;Okada, Y.; Morodomi, T.; Enghild, J.J.; Suzuki, K.; Yasui, A.; Nakanishi, I.; Salvesen
Eur. J. Biochem. 194, 721-730, 1990
A;Title: Matrix metalloproteinase 2 from human rheumatoid synovial fibroblasts. Purifica
A;Reference number: S13858; MUID:91099351; PMID:2269296
A;Accession: S13858
A;Molecule type: protein
A;Residues: 30-45;110-124 <OKA>
A;Cross-references: UNIPARC:UPI0000172CEA; UNIPARC:UPI0000172CEB
R;Crabbe, T.; Ioannou, C.; Docherty, A.J.P.
Eur. J. Biochem. 218, 431-438, 1993

A;Title: Human progelatinase A can be activated by autolysis at a rate that is concentra
A;Reference number: S39436; MUID:94094834; PMID:8269931
A;Accession: S39436
A;Molecule type: protein
A;Residues: 30-44;444-456 <CR2>
A;Cross-references: UNIPARC:UPI00000723BF; UNIPARC:UPI0000172CEC
R;Stetler-Stevenson, W.G.; Krutzsch, H.C.; Wacher, M.P.; Margulies, I.M.K.; Liotta, L.A.
J. Biol. Chem. 264, 1353-1356, 1989
A;Title: The activation of human type IV collagenase proenzyme. Sequence identification
A;Reference number: A31480; MUID:89109136; PMID:2536363
A;Accession: A31480
A;Molecule type: protein
A;Residues: 110-123 <STE>
A;Cross-references: UNIPARC:UPI0000158DA9
R;Crabbe, T.; Smith, B.; O'Connell, J.; Docherty, A.
FEBS Lett. 345, 14-16, 1994
A;Title: Human progelatinase A can be activated by matrilysin.
A;Reference number: S44432; MUID:94252395; PMID:8194591
A;Accession: S44432
A;Molecule type: protein
A;Residues: 110-115 <CRA>
A;Cross-references: UNIPARC:UPI0000172CED
R;Brown, D.; Chwa, M.; Escobar, M.; Kenney, M.C.
Exp. Eye Res. 52, 5-16, 1991
A;Title: Characterization of the major matrix degrading metalloproteinase of human corne
A;Reference number: A61498; MUID:91330998; PMID:1868885
A;Accession: A61498
A;Molecule type: protein
A;Residues: 'X',31,'X',33-46,'X',48-50,'Q' <BRO>
A;Cross-references: UNIPARC:UPI0000172CEE
A;Experimental source: corneal stroma
R;Itoh, Y.; Binner, S.; Nagase, H.
Biochem. J. 308, 645-651, 1995
A;Title: Steps involved in activation of the complex of pro-matrix metalloproteinase 2 (
A;Reference number: S55327; MUID:95290003; PMID:7772054
A;Accession: S55327
A;Molecule type: protein
A;Residues: 110-114 <ITO>
A;Cross-references: UNIPARC:UPI0000172CEF
C;Genetics:
A;Gene: GDB:MMP2; CLG4; CLG4A
A;Cross-references: GDB:120592; OMIM:120360
A;Map position: 16q13-16q13
A;Introns: 51/3; 127/2; 178/1; 220/1; 278/1; 336/1; 394/1; 446/1; 491/2; 537/1; 590/2; 6
C;Function:
A;Description: proteolytic cleavage of gelatin type I and collagen types IV, V, VII, and
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: extracellular matrix; fibroblast; glycoprotein; hydrolase; metalloproteinase
F;1-29/Domain: signal sequence #status predicted <SIG>
F;30-660/Product: progelatinase A #status predicted <PRO>
F;30-109/Domain: activation peptide #status predicted <ACT>
F;70-219,394-446/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;110-660/Product: gelatinase A #status predicted <MAT>
F;233-390/Region: collagen binding #status predicted
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;463-660/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted
F;469-660/Disulfide bonds: #status predicted
F;573,642/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match 100.0%; Score 114; DB 1; Length 660;
  Best Local Similarity 100.0%; Pred. No. 8.5e-10;
  Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 2
S70365
gelatinase A (EC 3.4.24.24) precursor - rabbit
N;Alternate names: matrix metalloproteinase-2; type IV collagenase
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 21-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
C;Accession: S70365
R;Matsumoto, S.; Katoh, M.; Watanabe, T.; Masuho, Y.
Biochim. Biophys. Acta 1307, 137-139, 1996
A;Title: Molecular cloning of rabbit matrix metalloproteinase-2 and its broad expression
A;Reference number: S70365; MUID:96283805; PMID:8679695
A;Accession: S70365
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <MAT>
A;Cross-references: UNIPROT:P50757; UNIPARC:UPI000012F23F; EMBL:D63579; NID:g944816; PIDN
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homolo
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F2>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

  Query Match 100.0%; Score 114; DB 2; Length 662;
  Best Local Similarity 100.0%; Pred. No. 8.6e-10;
  Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 3
A42496
gelatinase A (EC 3.4.24.24) precursor - mouse
N;Alternate names: collagenase type IV, 72K
C;Species: Mus musculus (house mouse)
C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A42496
R;Reponen, P.; Sahlberg, C.; Huhtala, P.; Hurskainen, T.; Thesleff, I.; Tryggvason, K.
J. Biol. Chem. 267, 7856-7862, 1992
A;Title: Molecular cloning of murine 72-kDa type IV collagenase and its expression during
A;Reference number: A42496; MUID:92218452; PMID:1373140
A;Accession: A42496
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <REP>
A;Cross-references: UNIPROT:P33434; UNIPARC:UPI000002777E; GB:M84324; NID:g198465; PIDN:A
A;Note: sequence extracted from NCBI backbone (NCBIN:96943, NCBIP:96945)
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homolo
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

  Query Match 100.0%; Score 114; DB 2; Length 662;
  Best Local Similarity 100.0%; Pred. No. 8.6e-10;
  Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 4
S34780

```
gelatinase A (EC 3.4.24.24) precursor - rat
N;Alternate names: collagenase type IV
C;Species: Rattus norvegicus (Norway rat)
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Accession: S34780; S32525
R;Lovett, D.H.
submitted to the EMBL Data Library, June 1993
A;Reference number: S34780
A;Accession: S34780
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <LOV>
A;Cross-references: UNIPROT:P33436; UNIPARC:UPI000012F240; EMBL:X71466; NID:g311750; PID
R;Marti, H.P.; McNeil, L.; Davies, M.; Martin, J.; Lovett, D.H.
Biochem. J. 291, 441-446, 1993
A;Title: Homology cloning of rat 72 kDa type IV collagenase: cytokine and second-messeng
A;Reference number: S32525; MUID:93249363; PMID:7916617
A;Accession: S32525
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 'R',27-662 <MAR>
A;Cross-references: UNIPARC:UPI0000175D90; EMBL:X71466
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

  Query Match             100.0%;  Score 114;  DB 2;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 8.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 5
S46492
gelatinase A (EC 3.4.24.24) precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S46492
R;Aimes, R.T.; French, D.L.; Quigley, J.P.
Biochem. J. 300, 729-736, 1994
A;Title: Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from chicken embryo f
A;Reference number: S46492; MUID:94280397; PMID:8010954
A;Accession: S46492
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-663 <AIM>
A;Cross-references: UNIPROT:Q90611; UNIPARC:UPI000012F23E; EMBL:U07775; NID:g504475; PID
A;Note: in the authors' translation 205-Asp is shown after residue 201 and, consequently
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;67-216,391-443/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;230-271/Domain: fibronectin type II repeat homology <2F1>
F;288-329/Domain: fibronectin type II repeat homology <2F8>
F;346-387/Domain: fibronectin type II repeat homology <2F9>
F;466-663/Domain: hemopexin repeat homology <PXN>
F;99,400,404,410/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;400,404,410/Binding site: zinc, catalytic (His) (active) #status predicted
F;401/Active site: Glu #status predicted

  Query Match             100.0%;  Score 114;  DB 1;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 8.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 6
JC5743
matrix metalloproteinase (EC 3.4.24.-) precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 09-Dec-1997 #sequence_revision 23-Jan-1998 #text_change 09-Jul-2004
C;Accession: JC5743
R;Bartlett, J.D.; Simmer, J.P.; Xue, J.; Margolis, H.C.; Moreno, E.C.
Gene 183, 123-128, 1996
A;Title: Molecular cloning and mRNA tissue distribution of a novel matrix metalloprotein
A;Reference number: JC5743; MUID:97149288; PMID:8996096
A;Accession: JC5743
A;Molecule type: mRNA
A;Residues: 1-483 <BAR>
A;Cross-references: UNIPROT:P79287; UNIPARC:UPI000012F257; GB:U54825; NID:g1800212; PIDN
A;Experimental source: enamel organ
C;Comment: This enzyme plays a role in enamel biomineralization and development.
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: hydrolase; metalloproteinase; zinc
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-483/Product: matrix metalloproteinase #status predicted <MAT>
F;68-271/Domain: matrix metalloproteinase homology <MMP>
F;290-483/Domain: hemopexin repeat homology <PXN>
F;100,226,230,236/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;226,230,236/Binding site: zinc, catalytic (His) #status predicted
F;227/Active site: Glu #status predicted

  Query Match             71.9%;  Score 82;  DB 2;  Length 483;
  Best Local Similarity   73.7%;  Pred. No. 6.1e-05;
  Matches   14;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| ||||||  || :||
Db         98 PRCGVPDVANYRLFPGEPK 116


RESULT 7
KCHUM
matrilysin (EC 3.4.24.23) precursor - human
N;Alternate names: matrin; matrix metalloproteinase 7 (MMP7); probable metalloproteinase
N;Contains: promatrilysin
C;Species: Homo sapiens (man)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: B28816; A60539; S24324
R;Muller, D.; Quantin, B.; Gesnel, M.C.; Millon-Collard, R.; Abecassis, J.; Breathnach,
Biochem. J. 253, 187-192, 1988
A;Title: The collagenase gene family in humans consists of at least four members.
A;Reference number: A90339; MUID:88339885; PMID:2844164
A;Accession: B28816
A;Molecule type: mRNA
A;Residues: 1-267 <MUL>
A;Cross-references: UNIPROT:P09237; UNIPARC:UPI00000422BD; EMBL:X07819; NID:g35798; PIDN
R;Miyazaki, K.; Hattori, Y.; Umenishi, F.; Yasumitsu, H.; Umeda, M.
Cancer Res. 50, 7758-7764, 1990
A;Title: Purification and characterization of extracellular matrix-degrading metalloprot
A;Reference number: A60539; MUID:91070531; PMID:2253219
A;Accession: A60539
A;Molecule type: protein
A;Residues: 18-35,'X',37-42 <MIY>
A;Cross-references: UNIPARC:UPI0000172CE6
R;Marti, H.P.; McNeil, L.; Thomas, G.; Davies, M.; Lovett, D.H.
Biochem. J. 285, 899-905, 1992
A;Title: Molecular characterization of a low-molecular-mass matrix metalloproteinase sec
A;Reference number: S24324; MUID:92359961; PMID:1497627
A;Accession: S24324
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-267 <MAR>
A;Cross-references: UNIPARC:UPI00000422BD; EMBL:Z11887; NID:g35802; PIDN:CAA77942.1; PID
C;Comment: This enzyme is similar in its activity to stromelysin and degrades various ex
```

```
s of types II, IV, IX, X, and XI.
C;Comment: Matrilysin hydrolyzes peptide bonds in plasminogen to yield a fragment with a
C;Genetics:
A;Gene: GDB:MMP7; MPSL1
A;Cross-references: GDB:125751; OMIM:178990
A;Map position: 11q21-11q22
C;Superfamily: matrilysin; matrix metalloproteinase homology
C;Keywords: calcium; extracellular matrix; fibroblast; hydrolase; metalloproteinase; zin
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-267/Product: promatrilysin #status predicted <PRO>
F;18-94/Domain: activation peptide #status predicted <ACT>
F;55-259/Domain: matrix metalloproteinase homology <MMP>
F;85-92/Region: autoinhibitory
F;95-267/Product: matrilysin #status predicted <MAT>
F;87,214,218,224/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;214,218,224/Binding site: zinc, catalytic (His) (active) #status predicted
F;215/Active site: Glu #status predicted

  Query Match             68.4%;  Score 78;  DB 1;  Length 267;
  Best Local Similarity   68.4%;  Pred. No. 0.00014;
  Matches   13;  Conservative    1;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| |: ||  ||
Db         85 PRCGVPDVAEYSLFPNSPK 103


RESULT 8
A53711
collagenase 3 (EC 3.4.24.-) - human
N;Alternate names: matrix metalloproteinase 13 (MMP13)
C;Species: Homo sapiens (man)
C;Date: 07-Jul-1995 #sequence_revision 07-Jul-1995 #text_change 09-Jul-2004
C;Accession: A53711
R;Freije, J.M.P.; Diez-Itza, I.; Balbin, M.; Sanchez, L.M.; Blasco, R.; Tolivia, J.; Lop
J. Biol. Chem. 269, 16766-16773, 1994
A;Title: Molecular cloning and expression of collagenase-3, a novel human matrix metallo
A;Reference number: A53711; MUID:94266894; PMID:8207000
A;Accession: A53711
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-471 <FRE>
A;Cross-references: UNIPROT:P45452; UNIPARC:UPI00000422BC; GB:X75308; NID:g516385; PIDN:
C;Genetics:
A;Gene: GDB:MMP13; CLG3
A;Cross-references: GDB:373966; OMIM:600108
A;Map position: 11q22.2-11q22.3
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;64-267/Domain: matrix metalloproteinase homology <MMP>
F;278-471/Domain: hemopexin repeat homology <PXN>
F;96,222,226,232/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;222,226,232/Binding site: zinc, catalytic (His) (active) #status predicted
F;223/Active site: Glu #status predicted

  Query Match             63.2%;  Score 72;  DB 2;  Length 471;
  Best Local Similarity   68.4%;  Pred. No. 0.0022;
  Matches   13;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  || |||  |
Db         94 PRCGVPDVGEYNVFPRTLK 112


RESULT 9
S29243
interstitial collagenase (EC 3.4.24.7) precursor - mouse
N;Alternate names: matrix metalloproteinase 1 (MMP1)
C;Species: Mus musculus (house mouse)
C;Date: 22-Nov-1993 #sequence_revision 03-Aug-1995 #text_change 09-Jul-2004
C;Accession: S29243
R;Henriet, P.; Rousseau, G.G.; Beckhout, Y.
FEBS Lett. 310, 175-178, 1992
A;Title: Cloning and sequencing of mouse collagenase cDNA. Divergence of mouse and rat c
A;Reference number: S29243; MUID:93011910; PMID:1383028
A;Accession: S29243
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-472 <HEN>
A;Cross-references: UNIPROT:P33435; UNIPARC:UPI00000213AD; EMBL:X66473; NID:g53603; PIDN
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;65-268/Domain: matrix metalloproteinase homology <MMP>
F;279-472/Domain: hemopexin repeat homology <PXN>
F;97,223,227,233/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status p
F;223,227,233/Binding site: zinc, catalytic (His) (active) #status predicted
F;224/Active site: Glu #status predicted

  Query Match             63.2%;  Score 72;  DB 2;  Length 472;
  Best Local Similarity   68.4%;  Pred. No. 0.0022;
  Matches   13;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  || |||  |
Db         95 PRCGVPDVGEYNVFPRTLK 113


RESULT 10
A23685
interstitial collagenase (EC 3.4.24.7) precursor - rat (fragment)
N;Alternate names: matrix metalloproteinase 1 (MMP1); vertebrate collagenase
C;Species: Rattus norvegicus (Norway rat)
C;Date: 04-Oct-1991 #sequence_revision 04-Oct-1991 #text_change 09-Jul-2004
C;Accession: A23685
R;Quinn, C.O.; Scott, D.K.; Brinckerhoff, C.E.; Matrisian, L.M.; Jeffrey, J.J.; Partridge
J. Biol. Chem. 265, 22342-22347, 1990
A;Title: Rat collagenase. Cloning, amino acid sequence comparison, and parathyroid hormon
A;Reference number: A23685; MUID:91093077; PMID:2176215
A;Accession: A23685
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-466 <QUI>
A;Cross-references: UNIPROT:P23097; UNIPARC:UPI000012F24F; GB:M60616; GB:M36452; NID:g20
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotein
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;59-262/Domain: matrix metalloproteinase homology <MMP>
F;273-466/Domain: hemopexin repeat homology <PXN>
F;91,217,221,227/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status p
F;217,221,227/Binding site: zinc, catalytic (His) (active) #status predicted
F;218/Active site: Glu #status predicted

  Query Match             60.5%;  Score 69;  DB 2;  Length 466;
  Best Local Similarity   68.4%;  Pred. No. 0.0063;
  Matches   13;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  || |||  |
Db         89 PRCGVPDVGVYNVFPRTLK 107


RESULT 11
A57490
matrilysin (EC 3.4.24.23) precursor - rat
N;Alternate names: matrix metalloproteinase 7 (MMP7)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 08-Dec-1995 #sequence_revision 08-Dec-1995 #text_change 09-Jul-2004
C;Accession: A57490
R;Abramson, S.R.; Conner, G.E.; Nagase, H.; Neuhaus, I.; Woessner Jr., J.F.
J. Biol. Chem. 270, 16016-16022, 1995
A;Title: Characterization of rat uterine matrilysin and its cDNA. Relationship to human
A;Reference number: A57490; MUID:95332299; PMID:7608162
A;Accession: A57490
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-267 <ABR>
A;Cross-references: UNIPROT:P50280; UNIPARC:UPI000012F244; GB:L24374; NID:g402492; PIDN:
```

```
C;Superfamily: matrilysin; matrix metalloproteinase homology
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-267/Product: matrilysin #status predicted <MAT>
F;58-262/Domain: matrix metalloproteinase homology <MMP>
F;90,217,221,227/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;217,221,227/Binding site: zinc, catalytic (His) (active) #status predicted
F;218/Active site: Glu #status predicted

  Query Match             59.6%;  Score 68;  DB 2;  Length 267;
  Best Local Similarity   57.9%;  Pred. No. 0.0051;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| ::  |  ||
Db         88 PRCGVPDVAEFSLMPNSPK 106


RESULT 12
T00643
zinc metalloproteinase homolog F3I6.6 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
C;Accession: T00643
R;Federspiel, N.A.; Palm, C.J.; Conway, A.B.; Kurtz, D.B.; Conway, A.R.; Au, M.; Araujo,
; Vysotskaia, V.S.; Yu, G.; Ecker, J.; Theologis, A.; Davis, R.W.
submitted to the EMBL Data Library, February 1998
A;Reference number: Z14197
A;Accession: T00643
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-377 <FED>
A;Cross-references: UNIPROT:O48680; UNIPARC:UPI00000AB794; EMBL:AC002396; NID:g2749918;
A;Experimental source: cultivar Columbia
C;Genetics:
A;Gene: ATSP:F3I6.6
A;Map position: 1

  Query Match             58.8%;  Score 67;  DB 2;  Length 377;
  Best Local Similarity   29.8%;  Pred. No. 0.01;
  Matches   14;  Conservative    3;  Mismatches    2;  Indels   28;  Gaps    1;

Qy          1 PRCGNPDVAN----------------------------YNFFPRKPK 19
              |||||||| |                            |:||| :|:
Db        114 PRCGNPDVVNGTSTMHSGRKTFEVSFAGRGQRFHAVKHYSFFPGEPR 160


RESULT 13
KCRTIH
stromelysin 1 (EC 3.4.24.17) precursor - rat
N;Alternate names: collagenase activating protein; matrix metalloproteinase 3 (MMP3); pr
C;Species: Rattus norvegicus (Norway rat)
C;Date: 13-Aug-1986 #sequence_revision 13-Aug-1986 #text_change 09-Jul-2004
C;Accession: A00997; PS0150; S22767
R;Matrisian, L.M.; Glaichenhaus, N.; Gesnel, M.C.; Breathnach, R.
EMBO J. 4, 1435-1440, 1985
A;Title: Epidermal growth factor and oncogenes induce transcription of the same cellular
A;Reference number: A00997; MUID:85284930; PMID:3875482
A;Accession: A00997
A;Molecule type: mRNA
A;Residues: 1-475 <MA1>
A;Cross-references: UNIPROT:P03957; UNIPARC:UPI000012F242; GB:X02601; NID:g57460; PIDN:C
R;Umenishi, F.; Yasumitsu, H.; Ashida, Y.; Yamauti, J.; Umeda, M.; Miyazaki, K.
J. Biochem. 108, 537-543, 1990
A;Title: Purification and properties of extracellular matrix-degrading metallo-proteinas
A;Reference number: PS0150; MUID:91154156; PMID:1963430
A;Accession: PS0150
A;Molecule type: protein
A;Residues: 19-20,'X',22-28;110-112,'X',114-115,'X',117,'X',119;309-325 <UME>
A;Cross-references: UNIPARC:UPI0000172CE1; UNIPARC:UPI0000172CE2; UNIPARC:UPI0000172CE3
R;Breathnach, R.; Matrisian, L.M.; Gesnel, M.C.; Staub, A.; Leroy, P.
Nucleic Acids Res. 15, 1139-1151, 1987
A;Title: Sequences coding for part of oncogene-induced transin are highly conserved in a
A;Reference number: A26403; MUID:87146421; PMID:3547333
A;Contents: annotation; introns
A;Note: intron positions were determined by comparison of the previously reported cDNA s
R;Sanchez-Lopez, R.; Nicholson, R.; Gesnel, M.C.; Matrisian, L.M.; Breathnach, R.
J. Biol. Chem. 263, 11892-11899, 1988
A;Title: Structure-function relationships in the collagenase family member transin.
A;Reference number: S22767; MUID:88298869; PMID:2841336
A;Contents: annotation; active site; activation
A;Note: molecules with mutations in the autoinhibitory region showed a much increased te
A;Note: mutations of His-216, Glu-217, and His-226 inactivate the enzyme
R;Park, A.J.; Matrisian, L.M.; Kells, A.F.; Pearson, R.; Yuan, Z.; Navre, M.
J. Biol. Chem. 266, 1584-1590, 1991
A;Title: Mutational analysis of the transin (rat stromelysin) autoinhibitor region demon
A;Reference number: A43028; MUID:91107652; PMID:1988438
A;Contents: annotation; autoinhibitory region
A;Note: Arg-89 and Cys-92 are essential for maintaining latency
C;Comment: This enzyme degrades various extracellular matrix proteins, including fibrone
C;Comment: Stromolysin 1 hydrolyzes peptide bonds in plasminogen to yield a fragment wit
C;Comment: Stromelysin 1 activates its proenzyme after cleavage(s) within the activation
C;Comment: Prostromelysin is found in glycosylated and unglycosylated forms, both of whi
C;Genetics:
A;Introns: 33/3; 115/2; 165/1; 207/1; 262/1; 310/2; 355/1; 408/2; 443/1
C;Function:
A;Description: endopeptidase preferentially hydrolyzing peptide bonds on the carboxyl si
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-475/Product: prostromelysin 1 #status predicted <PRO>
F;18-97/Domain: activation peptide #status predicted <ACT>
F;58-262/Domain: matrix metalloproteinase homology <MMP>
F;88-95/Region: autoinhibitory
F;98-475/Product: stromelysin 1 #status predicted <MAT>
F;282-475/Domain: hemopexin repeat homology <PXN>
F;90,216,220,226/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;118/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;216,220,226/Binding site: zinc, catalytic (His) (active) #status predicted
F;217/Active site: Glu #status experimental
F;288-475/Disulfide bonds: #status predicted

  Query Match             57.9%;  Score 66;  DB 1;  Length 475;
  Best Local Similarity   57.9%;  Pred. No. 0.019;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  ::  ||  ||
Db         88 PRCGVPDVGGFSTFPGSPK 106


RESULT 14
JC6505
stromelysin 2 (EC 3.4.24.22) precursor - mouse
N;Alternate names: matrix metalloproteinase 10
C;Species: Mus musculus (house mouse)
C;Date: 16-Oct-1998 #sequence_revision 16-Oct-1998 #text_change 09-Jul-2004
C;Accession: JC6505
R;Madlener, M.; Werner, S.
Gene 202, 75-81, 1997
A;Title: cDNA cloning and expression of the gene encoding murine stromelysin-2 (MMP-10).
A;Reference number: JC6505; MUID:98087420; PMID:9427548
A;Accession: JC6505
A;Molecule type: mRNA
A;Residues: 1-476 <MAD>
A;Cross-references: UNIPROT:O55123; UNIPARC:UPI0000003F45; GB:Y13185; NID:g2791311; PIDN
C;Comment: This enzyme degrades various extracellular matrix proteins, including fibrone
C;Genetics:
A;Gene: MMP-10
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-476/Product: prostromelysin 2 #status predicted <PRO>
F;18-99/Domain: activation peptide #status predicted <ACT>
F;60-264/Domain: matrix metalloproteinase homology <MMP>
F;90-97/Region: autoinhibitory
```

```
F;100-476/Product: stromelysin 2 #status predicted <MAT>
F;283-476/Domain: hemopexin repeat homology <PXN>
F;92,218,222,228/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;120/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;218,222,228/Binding site: zinc, catalytic (His) (active) #status predicted
F;219/Active site: Glu #status predicted
F;289-476/Disulfide bonds: #status predicted

  Query Match             57.9%;  Score 66;  DB 1;  Length 476;
  Best Local Similarity   57.9%;  Pred. No. 0.019;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  :: ||  ||
Db         90 PRCGVPDVGGFSTFPGSPK 108


RESULT 15
KCHUS2
stromelysin 2 (EC 3.4.24.22) precursor [validated] - human
N;Alternate names: matrix metalloproteinase 10 (MMP10); transin-2
C;Species: Homo sapiens (man)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: A28816; A47496
R;Muller, D.; Quantin, B.; Gesnel, M.C.; Millon-Collard, R.; Abecassis, J.; Breathnach,
Biochem. J. 253, 187-192, 1988
A;Title: The collagenase gene family in humans consists of at least four members.
A;Reference number: A90339; MUID:88339885; PMID:2844164
A;Accession: A28816
A;Molecule type: mRNA
A;Residues: 1-476 <MUL>
A;Cross-references: UNIPROT:P09238; UNIPARC:UPI00000422C0; EMBL:X07820; NID:g36628; PIDN
A;Note: mRNA for this protein was detected in several human tumors
R;Windsor, L.J.; Grenett, H.; Birkedal-Hansen, B.; Bodden, M.K.; Engler, J.A.; Birkedal-
J. Biol. Chem. 268, 17341-17347, 1993
A;Title: Cell type-specific regulation of SL-1 and SL-2 genes. Induction of the SL-2 gen
A;Reference number: A47496; MUID:93352520; PMID:8349617
A;Accession: A47496
A;Molecule type: protein
A;Residues: 17-33 <WIN>
A;Cross-references: UNIPARC:UPI0000172CE4
C;Comment: This enzyme degrades various extracellular matrix proteins, including fibrone
C;Genetics:
A;Gene: GDB:MMP10; STMY2
A;Cross-references: GDB:120392; OMIM:185260
A;Map position: 11q22.3-11q23
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-16/Domain: signal sequence #status predicted <SIG>
F;17-476/Product: prostromelysin 2 #status experimental <PRO>
F;17-98/Domain: activation peptide #status predicted <ACT>
F;59-263/Domain: matrix metalloproteinase homology <MMP>
F;89-96/Region: autoinhibitory
F;99-476/Product: stromelysin 2 #status predicted <MAT>
F;283-476/Domain: hemopexin repeat homology <PXN>
F;91,217,221,227/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;119/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;217,221,227/Binding site: zinc, catalytic (His) (active) #status predicted
F;218/Active site: Glu #status predicted
F;289-476/Disulfide bonds: #status predicted

  Query Match             57.9%;  Score 66;  DB 1;  Length 476;
  Best Local Similarity   57.9%;  Pred. No. 0.019;
  Matches   11;  Conservative    3;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||  ::: ||  ||
Db         89 PRCGVPDVGHFSSFPGMPK 107


Search completed: February 21, 2006, 08:01:07
Job time : 30.5 secs
```

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:31:04 ; Search time 190.5 Seconds
(without alignments)
70.368 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 17

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	112	2	Q9N1T9_CANFA	Q9n1t9 canis famil
2	114	100.0	223	2	Q4KLF6_XENLA	Q4klf6 xenopus lae
3	114	100.0	559	2	Q7SYA5_XENLA	Q7sya5 xenopus lae
4	114	100.0	595	2	Q6GQI1_XENLA	Q6gqi1 xenopus lae
5	114	100.0	632	2	Q9N1P6_CANFA	Q9n1p6 canis famil
6	114	100.0	654	2	Q6U7G9_MELGA	Q6u7g9 meleagris g
7	114	100.0	655	2	Q5FVW8_XENTR	Q5fvw8 xenopus tro
8	114	100.0	656	2	Q8UUZ3_XENLA	Q8uuz3 xenopus lae
9	114	100.0	660	1	MMP2_HUMAN	P08253 homo sapien
10	114	100.0	660	2	Q5IY21_TUPGB	Q5iy21 tupaia glis
11	114	100.0	661	2	Q95JA4_PIG	Q95ja4 sus scrofa
12	114	100.0	661	2	Q9GLE5_BOVIN	Q9gle5 bos taurus
13	114	100.0	662	1	MMP2_MOUSE	P33434 mus musculu
14	114	100.0	662	1	MMP2_RABIT	P50757 oryctolagus
15	114	100.0	662	1	MMP2_RAT	P33436 rattus norv
16	114	100.0	662	2	Q6GMM9_RAT	Q6gmm9 rattus norv
17	114	100.0	663	1	MMP2_CHICK	Q90611 gallus gall

ALIGNMENTS

RESULT 1
Q9N1T9_CANFA
ID Q9N1T9_CANFA PRELIMINARY; PRT; 112 AA.
AC Q9N1T9;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Matrix metalloproteinase-2 (Fragment).
GN Name=MMP-2;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Fibrosarcoma;
RA Jahic H., Kitchell B.E., Paria B.C.;
RL Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AF147750; AAF67001.1; -; mRNA.
DR HSSP; P08253; 1GXD.
DR MEROPS; M10.003; -.
DR Ensembl; ENSCAFG00000009421; Canis familiaris.
DR GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000794; Ketoacyl_synth.
DR InterPro; IPR001818; Pept_M10A_M12B.
DR Pfam; PF03933; Peptidase_M10_N; 1.
DR PROSITE; PS00606; B_KETOACYL_SYNTHASE; UNKNOWN_1.
DR PROSITE; PS00546; CYSTEINE_SWITCH; 1.
FT NON_TER 1 1
FT NON_TER 112 112
SQ SEQUENCE 112 AA; 12110 MW; 7FD7259CAACD9617 CRC64;

Query Match 100.0%; Score 114; DB 2; Length 112;
Best Local Similarity 100.0%; Pred. No. 9.6e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         94 PRCGNPDVANYNFFPRKPK 112
```

RESULT 2
Q4KLF6_XENLA
ID Q4KLF6_XENLA PRELIMINARY; PRT; 223 AA.
AC Q4KLF6;
DT 13-SEP-2005 (TrEMBLrel. 31, Created)
DT 13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE Hypothetical protein.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC Xenopodinae; Xenopus; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA Richardson P.;
RT "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT initiative.";
RL Dev. Dyn. 225:384-391(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

```
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Gerhard D.S.;
RL   Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC099241; AAH99241.1; -; mRNA.
KW   Hypothetical protein.
SQ   SEQUENCE   223 AA;  25889 MW;  AB815A358ECD68F1 CRC64;

  Query Match           100.0%;  Score 114;  DB 2;  Length 223;
  Best Local Similarity  100.0%;  Pred. No. 2e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         96 PRCGNPDVANYNFFPRKPK 114


RESULT 3
Q7SYA5_XENLA
ID   Q7SYA5_XENLA PRELIMINARY;      PRT;   559 AA.
AC   Q7SYA5;
DT   01-OCT-2003 (TrEMBLrel. 25, Created)
DT   01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Mmp2-prov protein.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Strausberg R.;
RL   Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC054947; AAH54947.1; -; mRNA.
DR   HSSP; P08253; 1HOV.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 2.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 2.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   559 AA;  63084 MW;  F27BD8ACE59E4B52 CRC64;

  Query Match           100.0%;  Score 114;  DB 2;  Length 559;
  Best Local Similarity  100.0%;  Pred. No. 5.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         96 PRCGNPDVANYNFFPRKPK 114


RESULT 4
Q6GQI1_XENLA
ID   Q6GQI1_XENLA PRELIMINARY;      PRT;   595 AA.
AC   Q6GQI1;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2-prov protein (Fragment).
GN   Name=mmp2-prov;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
```

```
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RA   Klein S., Strausberg R.;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC072762; AAH72762.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 3.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER      595    595
SQ   SEQUENCE   595 AA;  67335 MW;  688556DF6039FF83 CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 595;
  Best Local Similarity   100.0%;  Pred. No. 5.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         96 PRCGNPDVANYNFFPRKPK 114


RESULT 5
Q9N1P6_CANFA
ID   Q9N1P6_CANFA PRELIMINARY;      PRT;   632 AA.
AC   Q9N1P6;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase-2 (Fragment).
GN   Name=MMP-2;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC   Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Fibrosarcoma;
RA   Jahic H., Paria B., Balkin R., Baxendale V., Fang Y., Kitchell B.;
RL   Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF177217; AAF67517.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSCAFG00000009421; Canis familiaris.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER       1      1
SQ   SEQUENCE   632 AA;  70991 MW;  D8AE895497E129F3 CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 632;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         72 PRCGNPDVANYNFFPRKPK 90


RESULT 6
Q6U7G9_MELGA
ID   Q6U7G9_MELGA PRELIMINARY;      PRT;   654 AA.
AC   Q6U7G9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Gelatinase A.
OS   Meleagris gallopavo (Common turkey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Meleagris.
OX   NCBI_TaxID=9103;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Monsonego Ornan E., Tong A.;
RL   Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY376899; AAQ98971.1; -; mRNA.
DR   HSSP; P08254; 1B3D.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
```

```
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   654 AA;  73956 MW;  F9B0755F76B6F8DD CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 654;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 7
Q5FVW8_XENTR
ID   Q5FVW8_XENTR PRELIMINARY;      PRT;   655 AA.
AC   Q5FVW8;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   MGC108375 protein.
GN   Name=MGC108375;
OS   Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Silurana.
OX   NCBI_TaxID=8364;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RA   Klein S., Gerhard D.S.;
RL   Submitted (FEB-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC089734; AAH89734.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR002477; PGBD_1.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   655 AA;  74345 MW;  2AFD4C93786A625C CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 655;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         95 PRCGNPDVANYNFFPRKPK 113


RESULT 8
Q8UUZ3_XENLA
ID   Q8UUZ3_XENLA PRELIMINARY;      PRT;   656 AA.
AC   Q8UUZ3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=21888509; PubMed=11891989; DOI=10.1002/dvdy.10069;
RA   Jung J.C., Leco K.J., Edwards D.R., Fini M.E.;
RT   "Matrix metalloproteinases mediate the dismantling of mesenchymal
RT   structures in the tadpole tail during thyroid hormone-induced tail
RT   resorption.";
RL   Dev. Dyn. 223:402-413(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RA   Leco K., Jung J.-C., Fini M., Edwards D.R.;
RL   Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY037943; AAL01591.1; -; mRNA.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 2.
```

```
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   656 AA;  74272 MW;  50C28A99C427F51D CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 656;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         96 PRCGNPDVANYNFFPRKPK 114


RESULT 9
MMP2_HUMAN
ID   MMP2_HUMAN     STANDARD;      PRT;   660 AA.
AC   P08253;
DT   01-AUG-1988 (Rel. 08, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A) (TBE-
DE   1).
GN   Name=MMP2; Synonyms=CLG4A;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE OF 19-660, AND PARTIAL PROTEIN SEQUENCE.
RX   MEDLINE=88198218; PubMed=2834383;
RA   Collier I.E., Wilhelm S.M., Eisen A.Z., Marmer B.L., Grant G.A.,
RA   Seltzer J.L., Kronberger A., He C., Bauer E.A., Goldberg G.I.;
RT   "H-ras oncogene-transformed human bronchial epithelial cells (TBE-1)
RT   secrete a single metalloprotease capable of degrading basement
RT   membrane collagen.";
RL   J. Biol. Chem. 263:6579-6587(1988).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=91236162; PubMed=1851724;
RA   Collier I.E., Bruns G.A.P., Goldberg G.I., Gerhard D.S.;
RT   "On the structure and chromosome location of the 72- and 92-kDa human
RT   type IV collagenase genes.";
RL   Genomics 9:429-434(1991).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=90293047; PubMed=2162831;
RA   Huhtala P., Chow L.T., Tryggvason K.;
RT   "Structure of the human type IV collagenase gene.";
RL   J. Biol. Chem. 265:11077-11082(1990).
RN   [4]
RP   NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANTS VAL-447 AND LEU-621.
RA   Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N.,
RA   Nguyen C.P., Nguyen D.A., Poel C.L., Chambers S.W., Schackwitz W.S.,
RA   Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.;
RT   "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department
RT   of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).";
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
RN   [5]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [6]
RP   NUCLEOTIDE SEQUENCE OF 1-51.
RX   MEDLINE=90228972; PubMed=2158484;
RA   Huhtala P., Eddy R.L., Fan Y.S., Byers M.G., Shows T.B.,
RA   Tryggvason K.;
RT   "Completion of the primary structure of the human type IV collagenase
RT   preproenzyme and assignment of the gene (CLG4) to the q21 region of
RT   chromosome 16.";
RL   Genomics 6:554-559(1990).
RN   [7]
RP   ENZYME REGULATION.
RX   PubMed=11179305; DOI=10.1128/IAI.69.3.1402-1408.2001;
RA   Gusman H., Travis J., Helmerhorst E.J., Potempa J., Troxler R.F.,
RA   Oppenheim F.G.;
RT   "Salivary histatin 5 is an inhibitor of both host and bacterial
RT   enzymes implicated in periodontal disease.";
RL   Infect. Immun. 69:1402-1408(2001).
RN   [8]
RP   PROCESSING OF KISS1.
RX   MEDLINE=22761370; PubMed=12879005; DOI=10.1038/sj.onc.1206542;
RA   Takino T., Koshikawa N., Miyamori H., Tanaka M., Sasaki T., Okada Y.,
RA   Seiki M., Sato H.;
RT   "Cleavage of metastasis suppressor gene product KiSS-1
RT   protein/metastin by matrix metalloproteinases.";
RL   Oncogene 22:4617-4626(2003).
RN   [9]
RP   X-RAY CRYSTALLOGRAPHY (2.15 ANGSTROMS) OF 443-660.
RX   MEDLINE=96069777; PubMed=7583664;
RA   Libson A.M., Gittis A.G., Collier I.E., Marmer B.L., Goldberg G.I.,
RA   Lattman E.E.;
RT   "Crystal structure of the haemopexin-like C-terminal domain of
RT   gelatinase A.";
RL   Nat. Struct. Biol. 2:938-942(1995).
RN   [10]
RP   X-RAY CRYSTALLOGRAPHY (2.6 ANGSTROMS) OF 458-660.
RX   MEDLINE=96140723; PubMed=8549817; DOI=10.1016/0014-5793(95)01435-7;
RA   Gohlke U., Gomis-Rueth F.-X., Crabbe T., Murphy G., Docherty A.J.,
RA   Bode W.;
RT   "The C-terminal (haemopexin-like) domain structure of human gelatinase
RT   A (MMP2): structural implications for its function.";
RL   FEBS Lett. 378:126-130(1996).
CC   -!- FUNCTION: In addition to gelatin and collagens, it cleaves KiSS1
CC       at a Gly-|-Leu bond.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit.
CC   -!- COFACTOR: Binds 2 zinc ions per subunit.
CC   -!- ENZYME REGULATION: Inhibited by histatin-3 1/24 (histatin-5).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ----------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ----------------------------------------------------------------------
DR   EMBL; J03210; AAA35701.1; -; mRNA.
```

```
DR   EMBL; M33789; AAA52027.1; -; Genomic_DNA.
DR   EMBL; M55593; AAA52028.1; -; Genomic_DNA.
DR   EMBL; M58552; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55582; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55583; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55584; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55585; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55586; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55587; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55588; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55589; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55590; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55591; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55592; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; AY738117; AAU10089.1; -; Genomic_DNA.
DR   EMBL; BC002576; AAH02576.1; -; mRNA.
DR   PIR; A28153; A28153.
DR   PDB; 1CK7; X-ray; A=30-660.
DR   PDB; 1CXW; NMR; A=278-336.
DR   PDB; 1EAK; X-ray; A/B/C/D=32-452.
DR   PDB; 1GEN; X-ray; @=443-660.
DR   PDB; 1GXD; X-ray; A/B=30-660.
DR   PDB; 1HOV; NMR; A=110-214.
DR   PDB; 1J7M; NMR; A=337-394.
DR   PDB; 1KS0; NMR; A=223-282.
DR   PDB; 1QIB; X-ray; A=115-216.
DR   PDB; 1RTG; X-ray; @=451-660.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSG00000087245; Homo sapiens.
DR   HGNC; HGNC:7166; MMP2.
DR   H-InvDB; HIX0013041; -.
DR   MIM; 120360; -.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0004228; F:gelatinase A activity; TAS.
DR   GO; GO:0008270; F:zinc ion binding; TAS.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   3D-structure; Calcium; Collagen degradation;
KW   Direct protein sequencing; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Polymorphism; Protease;
KW   Repeat; Signal; Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP      30    109       Activation peptide.
FT   CHAIN       110    660       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      466    660       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.

  Query Match             100.0%;  Score 114;  DB 1;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 10
Q5IY21_TUPGB
ID   Q5IY21_TUPGB PRELIMINARY;      PRT;   660 AA.
AC   Q5IY21;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   Matrix metalloproteinase 2.
OS   Tupaia glis belangeri (Common tree shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Scandentia; Tupaiidae; Tupaia.
OX   NCBI_TaxID=37347;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15621657; DOI=10.1080/10425170400012925;
RA   Kenning M.S., Gentle A., McBrien N.A.;
RT   "Expression and cDNA sequence of matrix metalloproteinase-2 (MMP-2) in
RT   a mammalian model of human disease processes: Tupaia belangeri.";
RL   DNA Seq. 15:332-337(2004).
DR   EMBL; AY600958; AAT44903.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 2.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   660 AA;  73871 MW;  FC7EB8481091C5ED CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 11
Q95JA4_PIG
ID   Q95JA4_PIG  PRELIMINARY;      PRT;   661 AA.
AC   Q95JA4;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Gelatinase A.
GN   Name=MMP-2;
OS   Sus scrofa (Pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
```

```
OC   Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Tooth enamel organ;
RX   MEDLINE=21480581; PubMed=11597028;
RA   Caron C., Xue J., Sun X., Simmer J.P., Bartlett J.D.;
RT   "Gelatinase A (MMP-2) in developing tooth tissues and amelogenin
RT   hydrolysis.";
RL   J. Dent. Res. 80:1660-1664(2001).
DR   EMBL; AF295805; AAK97133.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   661 AA;  73669 MW;  41CD448BD72D2CC2 CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        101 PRCGNPDVANYNFFPRKPK 119


RESULT 12
Q9GLE5_BOVIN
ID   Q9GLE5_BOVIN PRELIMINARY;      PRT;   661 AA.
AC   Q9GLE5;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloprotease 2.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC   Pecora; Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Yan L., Zhang B., Tsang P., Fang J., Yu Y., Ingber D.E., Moses M.A.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF290428; AAG28169.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
KW   Metalloprotease; Protease.
SQ   SEQUENCE   661 AA;  73776 MW;  90545F7645E5F84D CRC64;

  Query Match             100.0%;  Score 114;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 6.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        101 PRCGNPDVANYNFFPRKPK 119


RESULT 13
MMP2_MOUSE
ID   MMP2_MOUSE     STANDARD;      PRT;   662 AA.
AC   P33434;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=92218452; PubMed=1373140;
RA   Reponen P., Sahlberg C., Huhtala P., Hurskainen T., Thesleff I.,
RA   Tryggvason K.;
RT   "Molecular cloning of murine 72-kDa type IV collagenase and its
RT   expression during mouse development.";
RL   J. Biol. Chem. 267:7856-7862(1992).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   STRAIN=C57BL/6; TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
```

```
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   DEVELOPMENTAL STAGE.
RC   TISSUE=Embryo;
RX   PubMed=2744464;
RA   Brenner C.A., Adler R.R., Rappolee D.A., Pedersen R.A., Werb Z.;
RT   "Genes for extracellular-matrix-degrading metalloproteinases and their
RT   inhibitor, TIMP, are expressed during early mammalian development.";
RL   Genes Dev. 3:848-859(1989).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- DEVELOPMENTAL STAGE: Present in unfertilized eggs and at the
CC       zygote and cleavage stages. Levels increase at the blastocyst
CC       stage and with endoderm differentiation.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; M84324; AAA39338.1; -; mRNA.
DR   EMBL; BC070430; AAH70430.1; -; mRNA.
DR   PIR; A42496; A42496.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSMUSG00000031740; Mus musculus.
DR   MGI; MGI:97009; Mmp2.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    662       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      468    662       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.
FT   REGION      222    396       Collagen-binding.
FT   REGION      397    467       Collagenase-like 2.
FT   ACT_SITE    404    404       By similarity.
FT   METAL       134    134       Calcium 1 (By similarity).
FT   METAL       168    168       Calcium 2 (By similarity).
FT   METAL       178    178       Zinc 1 (By similarity).
FT   METAL       180    180       Zinc 1 (By similarity).
FT   METAL       185    185       Calcium 3 (By similarity).
FT   METAL       186    186       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       193    193       Zinc 1 (By similarity).
FT   METAL       200    200       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       202    202       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       204    204       Calcium 2 (By similarity).
FT   METAL       206    206       Zinc 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       209    209       Calcium 1 (By similarity).
FT   METAL       211    211       Calcium 3 (By similarity).
FT   METAL       403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL       407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL       413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL       478    478       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       523    523       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       571    571       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       620    620       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE        102    102       Cysteine switch (Potential).
FT   CARBOHYD    575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID    471    662       By similarity.
SQ   SEQUENCE   662 AA;  74102 MW;  C630A7DBDB272F02 CRC64;
```

Query Match 100.0%; Score 114; DB 1; Length 662;
Best Local Similarity 100.0%; Pred. No. 6.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||| 
Db        100 PRCGNPDVANYNFFPRKPK 118
```

```
RESULT 14
MMP2_RABIT
ID   MMP2_RABIT     STANDARD;      PRT;   662 AA.
AC   P50757;
DT   01-OCT-1996 (Rel. 34, Created)
DT   01-OCT-1996 (Rel. 34, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC   Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Japanese white; TISSUE=Articular joint;
RX   MEDLINE=96283805; PubMed=8679695; DOI=10.1016/0167-4781(96)00050-4;
RA   Matsumoto S., Katoh M., Watanabe T., Masuho Y.;
RT   "Molecular cloning of rabbit matrix metalloproteinase-2 and its broad
RT   expression at several tissues.";
RL   Biochim. Biophys. Acta 1307:137-139(1996).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
```

```
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; D63579; BAA09796.1; -; mRNA.
DR   PIR; S70365; S70365.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEIIT.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP      30    109       Activation peptide.
FT   CHAIN      110    662       72 kDa type IV collagenase.
FT   DOMAIN     228    276       Fibronectin type-II 1.
FT   DOMAIN     286    334       Fibronectin type-II 2.
FT   DOMAIN     344    392       Fibronectin type-II 3.
FT   DOMAIN     468    662       Hemopexin-like.
FT   REGION     110    221       Collagenase-like 1.
FT   REGION     222    396       Collagen-binding.
FT   REGION     397    467       Collagenase-like 2.
FT   ACT_SITE   404    404       By similarity.
FT   METAL      134    134       Calcium 1 (By similarity).
FT   METAL      168    168       Calcium 2 (By similarity).
FT   METAL      178    178       Zinc 1 (By similarity).
FT   METAL      180    180       Zinc 1 (By similarity).
FT   METAL      185    185       Calcium 3 (By similarity).
FT   METAL      186    186       Calcium 3 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      193    193       Zinc 1 (By similarity).
FT   METAL      200    200       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      202    202       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      204    204       Calcium 2 (By similarity).
FT   METAL      206    206       Zinc 1 (By similarity).
FT   METAL      208    208       Calcium 3 (By similarity).
FT   METAL      209    209       Calcium 1 (By similarity).
FT   METAL      211    211       Calcium 3 (By similarity).
FT   METAL      403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL      407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL      413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL      478    478       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      523    523       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      571    571       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      620    620       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   SITE       102    102       Cysteine switch (Potential).
FT   CARBOHYD   575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID   471    662       By similarity.
SQ   SEQUENCE   662 AA;  73803 MW;  1CC246B270E440C8 CRC64;

  Query Match           100.0%;  Score 114;  DB 1;  Length 662;
  Best Local Similarity  100.0%;  Pred. No. 6.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||| 
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 15
MMP2_RAT
ID   MMP2_RAT       STANDARD;      PRT;   662 AA.
AC   P33436; P97581;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=93249363; PubMed=7916617;
RA   Marti H.P., McNeil L., Davies M., Martin J., Lovett D.H.;
RT   "Homology cloning of rat 72 kDa type IV collagenase: cytokine and
RT   second-messenger inducibility in glomerular mesangial cells.";
RL   Biochem. J. 291:441-446(1993).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Wistar; TISSUE=Skin;
RA   Okada A., Basset P.;
RT   "The cloning of the cDNA encoding rat gelatinase A from a rat skin
RT   wound cDNA library.";
RL   Submitted (JUL-1996) to the EMBL/GenBank/DDBJ databases.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; X71466; CAA50583.1; -; mRNA.
DR   EMBL; U65656; AAB41692.1; -; mRNA.
DR   PIR; S34780; S34780.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   RGD; 621316; Mmp2.
DR   GO; GO:0004228; F:gelatinase A activity; IDA.
DR   GO; GO:0008237; F:metallopeptidase activity; TAS.
```

```
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP      30    109       Activation peptide.
FT   CHAIN      110    662       72 kDa type IV collagenase.
FT   DOMAIN     228    276       Fibronectin type-II 1.
FT   DOMAIN     286    334       Fibronectin type-II 2.
FT   DOMAIN     344    392       Fibronectin type-II 3.
FT   DOMAIN     468    662       Hemopexin-like.
FT   REGION     110    221       Collagenase-like 1.
FT   REGION     222    396       Collagen-binding.
FT   REGION     397    467       Collagenase-like 2.
FT   ACT_SITE   404    404       By similarity.
FT   METAL      134    134       Calcium 1 (By similarity).
FT   METAL      168    168       Calcium 2 (By similarity).
FT   METAL      178    178       Zinc 1 (By similarity).
FT   METAL      180    180       Zinc 1 (By similarity).
FT   METAL      185    185       Calcium 3 (By similarity).
FT   METAL      186    186       Calcium 3 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      193    193       Zinc 1 (By similarity).
FT   METAL      200    200       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      202    202       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      204    204       Calcium 2 (By similarity).
FT   METAL      206    206       Zinc 1 (By similarity).
FT   METAL      208    208       Calcium 3 (By similarity).
FT   METAL      209    209       Calcium 1 (By similarity).
FT   METAL      211    211       Calcium 3 (By similarity).
FT   METAL      403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL      407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL      413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL      478    478       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      523    523       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      571    571       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      620    620       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   SITE       102    102       Cysteine switch (Potential).
FT   CARBOHYD   575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID   471    662       By similarity.
FT   CONFLICT    42     42       A -> S (in Ref. 2).
FT   CONFLICT   286    286       A -> G (in Ref. 2).
FT   CONFLICT   369    369       N -> S (in Ref. 2).
FT   CONFLICT   435    435       H -> N (in Ref. 2).
FT   CONFLICT   586    586       A -> S (in Ref. 2).
SQ   SEQUENCE   662 AA;  74182 MW;  7496B34B0A21884B CRC64;
```

```
  Query Match           100.0%;  Score 114;  DB 1;  Length 662;
  Best Local Similarity  100.0%;  Pred. No. 6.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118
```

```
RESULT 16
Q6GMM9_RAT
ID   Q6GMM9_RAT  PRELIMINARY;      PRT;   662 AA.
AC   Q6GMM9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2 protein.
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RG   NIH MGC Project;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC074013; AAH74013.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
```

```
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   662 AA;  74149 MW;  C56BD787473FC03E CRC64;

  Query Match           100.0%;  Score 114;  DB 2;  Length 662;
  Best Local Similarity  100.0%;  Pred. No. 6.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 17
MMP2_CHICK
ID   MMP2_CHICK     STANDARD;      PRT;   663 AA.
AC   Q90611;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Embryo;
RX   MEDLINE=94280397; PubMed=8010954;
RA   Aimes R.T., French D.L., Quigley J.P.;
RT   "Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from
RT   chicken embryo fibroblasts using gene family PCR: expression of the
RT   gelatinase increases upon malignant transformation.";
RL   Biochem. J. 300:729-736(1994).
RN   [2]
RP   PROTEIN SEQUENCE OF 27-41 AND 107-122.
RX   MEDLINE=91161603; PubMed=1848240;
RA   Chen J.-M., Aimes R.T., Ward G.R., Youngleib G.L., Quigley J.P.;
RT   "Isolation and characterization of a 70-kDa metalloprotease
RT   (gelatinase) that is elevated in Rous sarcoma virus-transformed
RT   chicken embryo fibroblasts.";
RL   J. Biol. Chem. 266:5113-5121(1991).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between  the Swiss Institute of Bioinformatics  and the  EMBL outstation -
CC   the European Bioinformatics Institute.  There are no  restrictions on  its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; U07775; AAA19596.1; -; mRNA.
DR   PIR; S46492; S46492.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSGALG00000003580; Gallus gallus.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Direct protein sequencing;
KW   Extracellular matrix; Hydrolase; Metal-binding; Metalloprotease;
KW   Protease; Repeat; Signal; Zinc; Zymogen.
FT   SIGNAL        1     26
FT   PROPEP       27    106       Activation peptide.
FT   CHAIN       107    663       72 kDa type IV collagenase.
FT   DOMAIN      225    273       Fibronectin type-II 1.
FT   DOMAIN      283    331       Fibronectin type-II 2.
FT   DOMAIN      341    389       Fibronectin type-II 3.
FT   DOMAIN      469    663       Hemopexin-like.
FT   REGION      107    218       Collagenase-like 1.
FT   REGION      219    393       Collagen-binding.
FT   REGION      394    468       Collagenase-like 2.
FT   ACT_SITE    401    401       By similarity.
FT   METAL       131    131       Calcium 1 (By similarity).
FT   METAL       165    165       Calcium 2 (By similarity).
FT   METAL       175    175       Zinc 1 (By similarity).
FT   METAL       177    177       Zinc 1 (By similarity).
FT   METAL       182    182       Calcium 3 (By similarity).
FT   METAL       183    183       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       190    190       Zinc 1 (By similarity).
FT   METAL       197    197       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       199    199       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       201    201       Calcium 2 (By similarity).
FT   METAL       203    203       Zinc 1 (By similarity).
FT   METAL       205    205       Calcium 3 (By similarity).
FT   METAL       206    206       Calcium 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       400    400       Zinc 2 (catalytic) (By similarity).
FT   METAL       404    404       Zinc 2 (catalytic) (By similarity).
FT   METAL       410    410       Zinc 2 (catalytic) (By similarity).
FT   METAL       479    479       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       524    524       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       572    572       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       621    621       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE         99     99       Cysteine switch (Potential).
FT   DISULFID    472    663       By similarity.
FT   CONFLICT     40     40       P -> Q (in Ref. 2).
FT   CONFLICT    116    116       W -> T (in Ref. 2).
FT   CONFLICT    122    122       T -> I (in Ref. 2).
SQ   SEQUENCE   663 AA;  74941 MW;  8D6FDA4E67C3EBCA CRC64;

  Query Match           100.0%;  Score 114;  DB 1;  Length 663;
  Best Local Similarity  100.0%;  Pred. No. 6.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
```

Db 97 PRCGNPDVANYNFFPRKPK 115

Search completed: February 21, 2006, 18:42:03
Job time : 191.5 secs

APP - Diff Meth's

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: February 21, 2006, 17:57:40 ; Search time 192 Seconds
(without alignments)
43.480 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 54

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : A_Geneseq_21:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	19	6	ABP97133	Abp97133 Human mat
2	114	100.0	19	6	ABG76319	Abg76319 Human mat
3	114	100.0	19	8	ADQ17094	Adq17094 Human mat
4	114	100.0	19	9	ADV68475	Adv68475 Human mat
5	114	100.0	23	2	AAY07359	Aay07359 Matrix me
6	114	100.0	43	6	ABP97137	Abp97137 Human mat
7	114	100.0	43	6	ABG76323	Abg76323 Partial s
8	114	100.0	43	8	ADQ17098	Adq17098 Human mat
9	114	100.0	43	9	ADV68479	Adv68479 Human mat
10	114	100.0	44	6	ABP97124	Abp97124 Human mat
11	114	100.0	44	6	ABG76310	Abg76310 Human mat
12	114	100.0	44	8	ADQ17085	Adq17085 Human mat
13	114	100.0	44	9	ADV68466	Adv68466 Human mat
14	114	100.0	75	4	AAM30829	Aam30829 Peptide #
15	114	100.0	75	4	ABB22666	Abb22666 Protein #
16	114	100.0	75	5	ABG40146	Abg40146 Human pep
17	114	100.0	194	9	AEA20074	Aea20074 Novel hum
18	114	100.0	445	7	ADF59546	Adf59546 Human pol
19	114	100.0	462	9	AEA90447	Aea90447 Human lun
20	114	100.0	468	4	ABG24001	Abg24001 Novel hum
21	114	100.0	623	8	ABM84057	Abm84057 Human dia
22	114	100.0	631	1	AAP96143	Aap96143 Sequence
23	114	100.0	631	1	AAP91139	Aap91139 Human typ
24	114	100.0	631	2	AAR07969	Aar07969 Complete
25	114	100.0	631	2	AAY07350	Aay07350 Human typ
26	114	100.0	631	2	AAW41226	Aaw41226 Human mat
27	114	100.0	631	7	ADM48668	Adm48668 Human mat
28	114	100.0	631	8	ADT05996	Adt05996 Human mat
29	114	100.0	633	8	ADT05997	Adt05997 Mouse mat
30	114	100.0	644	4	AAB20490	Aab20490 Human mat
31	114	100.0	660	2	AAR06420	Aar06420 Type IV c
32	114	100.0	660	4	AAB84607	Aab84607 Amino aci
33	114	100.0	660	4	AAE10431	Aae10431 Human mat
34	114	100.0	660	5	ABB79413	Abb79413 Human mat
35	114	100.0	660	5	ABB90738	Abb90738 Human Tum
36	114	100.0	660	5	AAU84348	Aau84348 Protein M
37	114	100.0	660	6	ABU54445	Abu54445 Human tum
38	114	100.0	660	6	ABP97136	Abp97136 Human mat
39	114	100.0	660	6	AAO16608	Aao16608 Human mat
40	114	100.0	660	6	ABG76322	Abg76322 Human mat
41	114	100.0	660	7	ADD18578	Add18578 Human dis
42	114	100.0	660	7	ADP65244	Adp65244 Human mat
43	114	100.0	660	8	ADN07697	Adn07697 Human mat
44	114	100.0	660	8	ADQ17097	Adq17097 Human mat
45	114	100.0	660	9	ADV90301	Adv90301 Protease-
46	114	100.0	660	9	ADV68478	Adv68478 Human mat
47	114	100.0	662	7	ADE62857	Ade62857 Rat Prote
48	114	100.0	662	7	ADD46270	Add46270 Rat Prote
49	114	100.0	663	2	AAW41111	Aaw41111 Chicken m
50	114	100.0	663	8	ADT05976	Adt05976 Chicken m
51	114	100.0	663	8	ADT05995	Adt05995 Chicken m
52	114	100.0	708	7	ADF60554	Adf60554 Human con
53	114	100.0	708	9	AEA20970	Aea20970 Novel hum
54	114	100.0	1330	4	ABG23999	Abg23999 Novel hum

ALIGNMENTS

RESULT 1
ABP97133
ID ABP97133 standard; peptide; 19 AA.
XX
AC ABP97133;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:11.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular

PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 45; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 114; DB 6; Length 19;
Best Local Similarity 100.0%; Pred. No. 9.8e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 1 PRCGNPDVANYNFFPRKPK 19

RESULT 2
ABG76319
ID ABG76319 standard; peptide; 19 AA.
XX
AC ABG76319;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #11.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 44; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 114; DB 6; Length 19;
Best Local Similarity 100.0%; Pred. No. 9.8e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 1 PRCGNPDVANYNFFPRKPK 19

RESULT 3
ADQ17094
ID ADQ17094 standard; peptide; 19 AA.
XX
AC ADQ17094;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #2.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Claim 11; SEQ ID NO 11; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 114; DB 8; Length 19;
Best Local Similarity 100.0%; Pred. No. 9.8e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 1 PRCGNPDVANYNFFPRKPK 19

```
RESULT 4
ADV68475
ID   ADV68475 standard; peptide; 19 AA.
XX
AC   ADV68475;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 cleavage region polypeptide SeqID11.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW   metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW   metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW   metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW   metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW   metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW   metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW   metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS   Homo sapiens.
XX
PN   US2004259802-A1.
XX
PD   23-DEC-2004.
XX
PF   20-JUN-2003; 2003US-00601059.
XX
PR   20-JUN-2003; 2003US-00601059.
XX
PA   (YANG/) YANG S.
PA   (QUIR/) QUIRK S.
XX
PI   Yang S,  Quirk S;
XX
DR   WPI; 2005-047374/05.
XX
PT   A composition for decreasing and inhibiting the growth of chondrosarcoma
PT   cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT   matrix metalloproteinase inhibitor.
XX
PS   Claim 16; SEQ ID NO 11; 50pp; English.
XX
CC   This invention relates to a novel composition for inhibiting growth of
CC   chondrosarcoma cells comprising an amount of a peptide and a
CC   pharmaceutical carrier. The invention may be useful for the production of
CC   compounds with a cytostatic activity acting as metalloprotease 1
CC   inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC   metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC   metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC   metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC   metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC   metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC   metalloprotease inhibitors. The composition is useful for decreasing and
CC   inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC   growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC   treating chondrosarcomas and bone cancers. The present sequence is that
CC   of a peptide derived from a human matrix metalloproteinase which may be
CC   used during the development of a composition of the invention.
XX
SQ   Sequence 19 AA;

  Query Match             100.0%;  Score 114;  DB 9;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 9.8e-11;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19
```

```
RESULT 5
AAY07359
ID   AAY07359 standard; peptide; 23 AA.
XX
AC   AAY07359;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Matrix metalloprotease inhibitor peptide #23.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Synthetic.
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Example 1; Page 15; 61pp; English.
XX
CC   This peptide represents a matrix metalloprotease (MMP) inhibitor peptide
CC   of the invention. The peptides can be used to treat tissue damage caused
CC   by activated MMPs, e.g. for treating inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarcoidosis. Antibodies to the peptides
CC   can be used to detect the MMPs and can distinguish activated from latent
CC   enzyme. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC   2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 23 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 23;
  Best Local Similarity   100.0%;  Pred. No. 1.2e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          5 PRCGNPDVANYNFFPRKPK 23
```

```
RESULT 6
ABP97137
ID   ABP97137 standard; peptide; 43 AA.
XX
AC   ABP97137;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 peptide SEQ ID NO:15.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
```

KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Disclosure; Page 26; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP peptide, which is used in the exemplification of
CC the present invention
XX
SQ Sequence 43 AA;

```
  Query Match             100.0%;  Score 114;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42
```

RESULT 7
ABG76323
ID ABG76323 standard; protein; 43 AA.
XX
AC ABG76323;
XX
DT 10-MAY-2003 (first entry)
XX
DE Partial sequence from human matrix metalloproteinase-2 (MMP-2).
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 27; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. The present sequence represents a partial sequence of human
CC MMP-2
XX
SQ Sequence 43 AA;

```
  Query Match             100.0%;  Score 114;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42
```

RESULT 8
ADQ17098
ID ADQ17098 standard; peptide; 43 AA.
XX
AC ADQ17098;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) wound site peptide.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase

PT proenzyme.
XX
PS Disclosure; SEQ ID NO 15; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) wound site peptide. This sequence is used in the
CC exemplification of the invention.
XX
SQ Sequence 43 AA;

Query Match 100.0%; Score 114; DB 8; Length 43;
Best Local Similarity 100.0%; Pred. No. 2.4e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 24 PRCGNPDVANYNFFPRKPK 42

RESULT 9
ADV68479
ID ADV68479 standard; protein; 43 AA.
XX
AC ADV68479;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 polypeptide SeqID15.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Disclosure; SEQ ID NO 15; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 43 AA;

Query Match 100.0%; Score 114; DB 9; Length 43;
Best Local Similarity 100.0%; Pred. No. 2.4e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 24 PRCGNPDVANYNFFPRKPK 42

RESULT 10
ABP97124
ID ABP97124 standard; peptide; 44 AA.
XX
AC ABP97124;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:2.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 15; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.

```
CC   (I) is also useful for treating injuries including wounds, surgical
CC   incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC   for treating disorders characterised by excessive angiogenesis e.g.
CC   macular degeneration and diabetic retinopathy. The present sequence
CC   represents a human MMP cleavage region peptide, which is used in the
CC   exemplification of the present invention
XX
SQ   Sequence 44 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 11
ABG76310
ID   ABG76310 standard; protein; 44 AA.
XX
AC   ABG76310;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Human matrix metalloproteinase (MMP) peptide inhibitor #2.
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
KW   skin tone; wrinkle; anti-aging; vulnerary.
XX
OS   Homo sapiens.
XX
PN   WO2003016520-A1.
XX
PD   27-FEB-2003.
XX
PF   15-AUG-2002; 2002WO-US026198.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Malik S,  Villanueva JM;
XX
DR   WPI; 2003-289980/28.
XX
PT   Novel peptide inhibitor of proteinase activity of matrix
PT   metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT   stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS   Claim 1; Page 16; 120pp; English.
XX
CC   The present invention relates to peptide inhibitors of metalloproteinases
CC   (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC   peptide sequences related to the cleavage regions of the proenzyme forms
CC   of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC   proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC   development, treating wounds, preventing scarring, improving skin tone,
CC   reducing wrinkling and for simulating the development of smooth, healthy
CC   skin. The peptide inhibitors are useful as anti-aging and wound healing
CC   compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ   Sequence 44 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 12
ADQ17085
ID   ADQ17085 standard; peptide; 44 AA.
XX
AC   ADQ17085;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #1.
XX
KW   Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW   human; matrix metalloproteinase; MMP.
XX
OS   Homo sapiens.
XX
PN   US2004127421-A1.
XX
PD   01-JUL-2004.
XX
PF   30-DEC-2002; 2002US-00335207.
XX
PR   30-DEC-2002; 2002US-00335207.
XX
PA   (MALI/) MALIK S.
PA   (QUIR/) QUIRK S.
XX
PI   Malik S,  Quirk S;
XX
DR   WPI; 2004-506456/48.
XX
PT   Composition used for preventing and treating wrinkles and treating wounds
PT   comprises peptide having sequence related to matrix metalloproteinase
PT   proenzyme.
XX
PS   Example 1; SEQ ID NO 2; 60pp; English.
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC   the exemplification of the invention.
XX
SQ   Sequence 44 AA;

  Query Match             100.0%;  Score 114;  DB 8;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 13
ADV68466
ID   ADV68466 standard; protein; 44 AA.
XX
AC   ADV68466;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 cleavage region polypeptide SeqID2.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
```

KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Claim 16; SEQ ID NO 2; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 114; DB 9; Length 44;
Best Local Similarity 100.0%; Pred. No. 2.5e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 24 PRCGNPDVANYNFFPRKPK 42

RESULT 14
AAM30829
ID AAM30829 standard; protein; 75 AA.
XX
AC AAM30829;
XX
DT 17-OCT-2001 (first entry)
XX
DE Peptide #4866 encoded by probe for measuring placental gene expression.
XX
KW Probe; microarray; human; placenta; antenatal diagnosis;
KW genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200157272-A2.
XX
PD 09-AUG-2001.
XX
PF 30-JAN-2001; 2001WO-US000663.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2001-488897/53.
XX
PT Human genome-derived single exon nucleic acid probes useful for analyzing
PT gene expression in human placenta.
XX
PS Claim 27; SEQ ID NO 31098; 654pp; English.
XX
CC The present invention relates to single exon nucleic acid probes (SENP:
CC see AAI31315-AAI57546). The present sequence is a peptide encoded by one
CC such probe. The probes are useful for producing a microarray for
CC predicting, measuring and displaying gene expression in samples derived
CC from human placenta. The probes are useful for antenatal diagnosis of
CC human genetic disorders
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 114; DB 4; Length 75;
Best Local Similarity 100.0%; Pred. No. 4.5e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 49 PRCGNPDVANYNFFPRKPK 67

RESULT 15
ABB22666
ID ABB22666 standard; protein; 75 AA.
XX
AC ABB22666;
XX
DT 23-JAN-2002 (first entry)
XX
DE Protein #4665 encoded by probe for measuring heart cell gene expression.
XX
KW Human; gene expression; heart; microarray; vascular system;
KW cardiovascular disease; hypertension; cardiac arrhythmia;
KW congenital heart disease.
XX
OS Homo sapiens.
XX
PN WO200157274-A2.
XX
PD 09-AUG-2001.
XX
PF 30-JAN-2001; 2001WO-US000666.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.

XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2001-488899/53.
XX
PT Single exon nucleic acid probes for analyzing gene expression in human
PT hearts.
XX
PS Claim 15; SEQ ID NO 24436; 530pp; English.
XX
CC The present invention relates to single exon nucleic acid probes for
CC measuring human gene expression in a sample derived from human heart (see
CC ABA21535-ABA41305). The present sequence is a protein encoded by one such
CC probe. The probes may be used for predicting, measuring and displaying
CC gene expression in samples derived from the human heart via microarrays.
CC By measuring gene expression, the probes are useful for predicting,
CC diagnosing, grading, staging, monitoring and prognosing diseases of the
CC human heart and vascular system e.g. cardiovascular disease,
CC hypertension, cardiac arrhythmias and congenital heart disease. Note: The
CC sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 114; DB 4; Length 75;
Best Local Similarity 100.0%; Pred. No. 4.5e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 49 PRCGNPDVANYNFFPRKPK 67

RESULT 16
ABG40146
ID ABG40146 standard; peptide; 75 AA.
XX
AC ABG40146;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human peptide encoded by genome-derived single exon probe SEQ ID 29811.
XX
KW Human; single exon probe; asthma; lung cancer; COPD; ILD;
KW chronic obstructive pulmonary disease; interstitial lung disease;
KW familial idiopathic pulmonary fibrosis; neurofibromatosis;
KW tuberous sclerosis; Gaucher's disease; Niemann-Pick disease;
KW Hermansky-Pudlak syndrome; sarcoidosis; pulmonary haemosiderosis;
KW pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome;
KW pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia;
KW primary ciliary dyskinesis; pulmonary hypertension;
KW hyaline membrane disease.
XX
OS Homo sapiens.
XX
PN WO200186003-A2.
XX
PD 15-NOV-2001.
XX
PF 30-JAN-2001; 2001WO-US000665.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2002-114183/15.
XX
PT Spatially-addressable set of single exon nucleic acid probes, used to
PT measure gene expression in human lung samples.
XX
PS Claim 27; SEQ ID NO 29811; 634pp; English.
XX
CC The invention relates to a spatially-addressable set of single exon
CC nucleic acid probes for measuring gene expression in a sample derived
CC from human lung comprising single exon nucleic acid probes having one of
CC 12614 nucleic acid sequences mentioned in the specification, or their
CC complements or the 12387 open reading frames derived from the 12614
CC probes. Also included are a microarray comprising the novel set of probes
CC ; the novel set of probes which hybridise at high stringency to a nucleic
CC acid expressed in the human lung; measuring gene expression in a sample
CC derived from human lung, comprising (a) contacting the array with a
CC collection of detectably labeled nucleic acids derived from human lung
CC mRNA, and (b) measuring the label detectably bound to each probe of the
CC array; identifying exons in a eukaryotic genome, comprising (a)
CC algorithmically predicting at least one exon from genomic sequences of
CC the eukaryote; and (b) detecting specific hybridisation of detectably
CC labeled nucleic acids from eukaryote lung mRNA, to a single exon probe,
CC having a fragment identical to the predicted exon, the probe is included
CC in the above mentioned microarray; assigning exons to a single gene,
CC comprising (a) identifying exons from genomic sequence by the method
CC above and (b) measuring the expression of each of the exons in several
CC tissues and/or cell types using hybridisation to a single exon
CC microarrays having a probe with the exon, where a common pattern of
CC expression of the exons in the tissues and/or cell types indicates that
CC the exons should be assigned to a single gene; a peptide comprising one
CC of 12011 sequences, mentioned in the specification, or encoded by the
CC probes/open reading frames (ORF). The probes are used for gene expression
CC analysis, and for identifying exons in a gene, particularly using human
CC lung derived mRNA and for the study of lung diseases such as asthma, lung
CC cancer, chronic obstructive pulmonary disease (COPD), interstitial lung
CC disease (ILD), familial idiopathic pulmonary fibrosis, neurofibromatosis,
CC tuberous sclerosis, Gaucher's disease, Niemann-Pick disease, Hermansky-
CC Pudlak syndrome, sarcoidosis, pulmonary haemosiderosis, pulmonary
CC histiocytosis, lymphangioleiomyomtosis, pulmonary alveolar proteinosis,
CC Karagener syndrome, fibrocystic pulmonary dysplasia, primary ciliary
CC dyskinesis, pulmonary hypertension and hyaline membrane disease. The
CC present sequence is a peptide/protein encoded by a single exon probe of
CC the invention. Note: The sequence data for this patent did not form part
CC of the printed specification, but was obtained in electronic format
CC directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 114; DB 5; Length 75;
Best Local Similarity 100.0%; Pred. No. 4.5e-10;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 49 PRCGNPDVANYNFFPRKPK 67

RESULT 17
AEA20074
ID AEA20074 standard; protein; 194 AA.
XX
AC AEA20074;
XX
DT 11-AUG-2005 (first entry)
XX
DE Novel human polypeptide SEQ ID NO 768.
XX
KW vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW DNA purification; protein purification; osteoarthritis; antiarthritic;
KW osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;

```
KW   periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW   peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW   degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW   cerebrovascular ischemia; cerebroprotective; vasotropic;
KW   cardiovascular disease; autoimmune disease; immunosuppressive;
KW   immune disorder; viral infection; virucide; infection; cancer;
KW   cytostatic; neoplasm.
XX
OS   Homo sapiens.
XX
PN   WO2005049806-A2.
XX
PD   02-JUN-2005.
XX
PF   11-MAR-2004; 2004WO-US007412.
XX
PR   14-MAR-2003; 2003US-00389559.
XX
PA   (NUVE-) NUVELO INC.
XX
PI   Tang TY,  Wang J,  Wang ZW,  Zhang J,  Ren F,  Zhou P,  Ma Y;
PI   Ghosh M,  Xue A,  Asundi V,  Zhao Q,  Wang D,  Goodrich R,  Chen R;
PI   Wehrman T,  Weng G,  Boyle B;
XX
DR   WPI; 2005-417730/42.
DR   N-PSDB; AEA19507.
XX
PT   New polynucleotide encoding a polypeptide with biological activity,
PT   useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT   CNS and peripheral disease, stroke, autoimmune disorders, viral
PT   infection, or cancer.
XX
PS   Claim 20; SEQ ID NO 768; 500pp; English.
XX
CC   The invention describes a new isolated polynucleotide (I) encoding a
CC   polypeptide with biological activity comprising: a nucleotide sequence of
CC   SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC   to the sequence of (i) under stringent hybridization conditions; or a
CC   nucleotide sequence having greater than 99% sequence identity with the
CC   sequence of (i). Also described are: a(n) (expression)vector comprising
CC   (I); a host cell genetically engineered to comprise (I) operatively,
CC   associated with a regulatory sequence that modulates expression of the
CC   polynucleotide in the host cell; an isolated polypeptide comprising a
CC   sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC   is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC   polynucleotide hybridizing under stringent conditions with any one of SEQ
CC   ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC   carrier; an antibody directed against the polypeptide of (3); a method
CC   for detecting (I) in a sample; a method for detecting the polypeptide of
CC   (3) in a sample; a method for identifying a compound that binds to the
CC   polypeptide of (3); a method of producing the polypeptide of (3); and a
CC   collection of polynucleotides, where the collection comprising of at
CC   least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC   the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC   activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC   568-1134. All sequences are fully defined in the specification. The
CC   sequences and methods are useful in diagnostics, forensic, and gene
CC   mapping, in identifying of mutations responsible for genetic disorders or
CC   other traits, in assessing biodiversity, and for producing many other
CC   types of data and products dependent on DNA and amino acid sequences. The
CC   composition and method are useful for treating a disease or disorder,
CC   e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC   peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC   autoimmune disorders, viral infection, or cancer. This is the amino acid
CC   sequence of a novel polypeptide of the invention.
XX
SQ   Sequence 194 AA;

  Query Match             100.0%;  Score 114;  DB 9;  Length 194;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         65 PRCGNPDVANYNFFPRKPK 83


RESULT 18
ADF59546
ID   ADF59546 standard; protein; 445 AA.
XX
AC   ADF59546;
XX
DT   12-FEB-2004  (first entry)
XX
DE   Human polypeptide sequence SEQ ID NO:1954.
XX
KW   biological activity; genetic engineering; hybridisation probe; oligomer;
KW   primer; chromosome mapping; gene mapping; recombinant protein production;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO2003080795-A2.
XX
PD   02-OCT-2003.
XX
PF   09-AUG-2002; 2002WO-US025485.
XX
PR   09-AUG-2001; 2001US-0311261P.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Yang Y,  Wang Z,  Weng G,  Ma Y;
XX
DR   WPI; 2003-876918/81.
DR   N-PSDB; ADF58546.
XX
PT   New polynucleotides, useful as hybridization probes, oligomers or
PT   primers, for chromosome or gene mapping, for the recombinant production
PT   of proteins, and for generating antisense DNA or RNA.
XX
PS   Claim 20; SEQ ID NO 1954; 571pp; English.
XX
CC   The present sequence represents a polypeptide (II) with biological
CC   activity, which is encoded by an isolated polynucleotide sequence (I)
CC   from the present invention . Also described: (1) a vector comprising (I);
CC   (2) an expression vector comprising (I); (3) a host cell genetically
CC   engineered to comprise (I) which is operatively associated with a
CC   regulatory sequence that modulates expression of (I) in the host cell;
CC   (4) a polypeptide (II) encoded by (I); (5) a composition comprising the
CC   polypeptide of (4) and a carrier; (6) an antibody directed against the
CC   polypeptide of (4); (7) detecting (I) or the polypeptide of (4) in a
CC   sample; (8) identifying a compound that binds to the polypeptide of (4);
CC   (9) producing the polypeptide of (4); and (10) a collection of
CC   polynucleotides comprising at least one of the polynucleotide sequences
CC   (I). The polynucleotides (I) can be used as hybridisation probes,
CC   oligomers or primers, for chromosome or gene mapping, for the recombinant
CC   production of proteins, and for generating antisense DNA or RNA.
XX
SQ   Sequence 445 AA;

  Query Match             100.0%;  Score 114;  DB 7;  Length 445;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 19
AEA90447
ID   AEA90447 standard; protein; 462 AA.
XX
AC   AEA90447;
```

XX
DT 08-SEP-2005 (first entry)
XX
DE Human lung specifc protein, DEX0486_001.aa.1.
XX
KW DNA hybridization; diagnosis; diagnostic; lung tumor; vaccine;
KW cytostatic; gene therapy; drug screening.
XX
OS Homo sapiens.
XX
PN US2005142572-A1.
XX
PD 30-JUN-2005.
XX
PF 24-MAY-2004; 2004US-00852707.
XX
PR 22-MAY-2003; 2003US-0473941P.
XX
PA (MACI/) MACINA R A.
PA (TURN/) TURNER L R.
PA (SUNY/) SUN Y.
XX
PI Macina RA, Turner LR, Sun Y;
XX
DR WPI; 2005-457785/46.
XX
PT New nucleic acid molecule from Homo sapiens, useful for identifying,
PT diagnosing, monitoring, staging, imaging and treating a patient with lung
PT cancer and non-cancerous diseases.
XX
PS Claim 12; SEQ ID NO 56; 247pp; English.
XX
CC The present invention relates to human nucleic acid molecules that are
CC specific to lung cells, lung tissue and/or the lung organ. These lung
CC specific nucleic acids may be naturally occurring cDNA, genomic DNA, RNA
CC or a fragment, or a non-naturally occurring nucleic acid. Due to
CC alternative splicing and transcriptional modification one lung-specific
CC gene may encode for multiple lung specific RNA's. Specifically claimed is
CC new isolated nucleic acid molecule encoding a protein sequence selected
CC from 83 (SEQ ID NO: 56-138) sequences; and a nucleic acid selected from
CC 56(SEQ ID NO: 1-55) sequences. Described is a method of determining the
CC presence of a lung specific nucleic acid or protein in a sample; and a
CC method of diagnosing or monitoring the presence and metastases of lung
CC cancer in a patient. Claimed is a vaccine comprising the polypeptide or
CC the nucleic acid encoding the polypeptide. Determining the presence of a
CC lung specific nucleic acid in a sample comprises contacting the sample
CC with a nucleic acid molecule above which will hybridize to a lung
CC specific nucleic acid. A composition consisting of the nucleic acid
CC molecule or the polypeptide is useful for treating a patient with lung
CC cancer, where the administration induces an immune response against the
CC lung cancer cell expressing the nucleic acid molecule or polypeptide. The
CC nucleic acid molecule and polypeptide are also useful for identifying,
CC diagnosing, monitoring, staging, imaging and treating non-cancerous
CC disease states in lung, identifying lung tissue, monitoring and
CC identifying and/or designing (ant)agonists of the polypeptide, and for
CC gene therapy. The present sequence is a human lung specifc protein.
XX
SQ Sequence 462 AA;

Query Match 100.0%; Score 114; DB 9; Length 462;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 20
ABG24001
ID ABG24001 standard; protein; 468 AA.
XX
AC ABG24001;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #23992.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US008631.
XX
PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR N-PSDB; AAS88188.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
PS Claim 20; SEQ ID NO 54360; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC amino acid sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 468 AA;

Query Match 100.0%; Score 114; DB 4; Length 468;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 86 PRCGNPDVANYNFFPRKPK 104

RESULT 21
ABM84057
ID ABM84057 standard; protein; 623 AA.
XX
AC ABM84057;
XX
DT 18-NOV-2004 (first entry)

```
XX
DE   Human diagnostic and therapeutic pprotein SEQ ID NO:4306.
XX
KW   gene therapy; human diagnostic and therapeutic polynucleotide; dithp.
XX
OS   Homo sapiens.
XX
PN   WO2004023973-A2.
XX
PD   25-MAR-2004.
XX
PF   12-SEP-2003; 2003WO-US028227.
XX
PR   12-SEP-2002; 2002US-0410259P.
PR   12-SEP-2002; 2002US-0410260P.
XX
PA   (INCY-) INCYTE CORP.
XX
PI   Schmidt JP,  Wright RJ,  Bruns CM,  Marjanovic MM,  Shen F;
PI   Harthshorne TA,  Suchorolski MT,  Altus CM,  Pitts SJ,  Elder LV;
PI   Mooney EM,  Delegeane AM,  Panesar IS,  Banville SC,  Reddy TP;
PI   Stevens KA,  Blanchard JL,  Panzer SR,  Wang X,  Au AP,  Gerstin EH;
PI   Peralta CH,  Anderson SB,  Rioux P,  Shen EJ,  Wu MC,  Stuve LL;
PI   Lagace RE,  Spiro PA,  Stewart EA,  Wingrove J,  Vitt UA,  Kirton ES;
PI   Xu Y,  Kwong M,  Policky JL,  Hurwitz BL,  Ma Y,  Jackson JL,  Gietzen D;
PI   Patury S,  Shi X,  Suarez CJ;
XX
DR   WPI; 2004-329368/30.
DR   N-PSDB; ACN42709.
XX
PT   New diagnostic and therapeutic polynucleotides and polypeptides, useful
PT   in diagnosing a condition, disease or disorder associated with human
PT   molecules, e.g. autoimmune or inflammatory disorders, in gene therapy or
PT   in gene mapping.
XX
PS   Claim 27; Page; 190pp; English.
XX
CC   The invention relates to novel diagnostic and therapeutic polynucleotides
CC   selected from one of the 2722 sequences defined in the specification. A
CC   polynucleotide of the invention may have a use in gene therapy. The human
CC   diagnostic and therapeutic polynucleotides (dithp) or polypeptides may be
CC   used to diagnose a particular condition, disease or disorder associated
CC   with human molecules, e.g. cell proliferative disorders,
CC   autoimmune/inflammatory disorder, developmental disorder, endocrine
CC   disorder, neurological disorders, gastrointestinal disorders, or
CC   infections caused by virus, bacteria, fungi or parasite. The dithp
CC   molecules may also be used in genetic mapping, in identifying individuals
CC   from minute biological samples, in detecting single nucleotide
CC   polymorphisms, as molecular weight markers, and for somatic or germline
CC   gene therapy. The present sequence represents a dithp protein of the
CC   invention. Note: The sequence data for this patent is not represented in
CC   the printed specification, but was obtained in electronic format directly
CC   from WIPO at www.wipo.int/pct/en/sequences/listing.htm
XX
SQ   Sequence 623 AA;

  Query Match             100.0%;  Score 114;  DB 8;  Length 623;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 22
AAP96143
ID   AAP96143 standard; protein; 631 AA.
XX
AC   AAP96143;
XX
DT   25-MAR-2003  (revised)
DT   09-MAY-1991  (first entry)
XX
DE   Sequence of human type IV collagenase (gelatinase) in pGEL 186.2.
XX
KW   Hypertrophic scar; keloid; intervertebral disc disease; enzyme.
XX
OS   Homo sapiens.
XX
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
DR   N-PSDB; AAN91700.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Disclosure; Fig 3; 36pp; English.
XX
CC   The original source of the protein material was H-ras transformed human
CC   bronchial epithelial cells (TBE-1). The AA sequence was then used to
CC   develop oligonucleotide probes which were used to screen a cDNA library
CC   of human skin fibroblast mRNA. The longest clone, pGEL 186.2, represented
CC   almost the full gelatinase mRNA sequence except the leader sequence
CC   encoding the first few AA's of the signal peptide. (Updated on 25-MAR-
CC   2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 23
AAP91139
ID   AAP91139 standard; protein; 631 AA.
XX
AC   AAP91139;
XX
DT   25-MAR-2003  (revised)
DT   18-DEC-1989  (first entry)
XX
DE   Human type IV collagenase (gelatinase).
XX
KW   Human type IV collagenase; gelatinase; hypertrophic scars; keloids;
KW   intervertebral disc disease; extracellular matrix metalloprotease;
KW   bronchial epithelial cells; TBE-1 cells; pGel186.2; type II motif;
KW   fibonectin; collagen-binding domain.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1. .192
FT   Domain          193. .367
FT   Duplication     197. .254
FT   Duplication     255. .312
FT   Duplication     313. .368
FT   Domain          368. .631
XX
```

```
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Claim 2; Fig 6; 36pp; English.
XX
CC   Human type IV collagenase (gelatinase). Protein source was H-ras
CC   transformed human bronchial epithelial cells (TBE-1). The sequence was
CC   determined from clone pGel 186.2 which represents almost the full mRNA
CC   sequence. Feature 1 is the N-terminal domain, I; feature 2 is a middle
CC   domain, II, which is organised into 3 x 58 amino acid long head to tail
CC   repeats (features 4,5,and 6). These show homology to the type II motif
CC   collagen binding domain of fibronectin. Feature 3 is the C-terminal
CC   domain. The enzyme could be used in the treatment of hypertrophic scars,
CC   keloids, and intervertebral disc disease. See also AAN91700. (Updated on
CC   25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA
CC   field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 24
AAR07969
ID   AAR07969 standard; protein; 631 AA.
XX
AC   AAR07969;
XX
DT   25-MAR-2003  (revised)
DT   17-DEC-2001  (revised)
DT   16-JAN-1991  (first entry)
XX
DE   Complete type IV collagenase.
XX
KW   Type IV collagenase; peptide fragments; metalloproteinase detection;
KW   antibodies; metalloptroteinase inhibition; angiogenesis; arthritis;
KW   tumour growth; metastasis; granulomatous inflammatory conditions;
KW   sarciodosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .18
FT                   /label= 1
FT   Peptide         19. .33
FT                   /label= 2
FT   Peptide         26. .42
FT                   /label= 3
FT   Protein         34. .50
FT                   /label= 4
FT   Peptide         51. .66
FT                   /label= 5
FT   Peptide         67. .89
FT                   /label= 7
FT   Peptide         67. .80
FT                   /label= 6
FT   Peptide         69. .75
FT                   /label= 8
FT   Peptide         75. .94
FT                   /label= 9
FT   Peptide         141. .150
FT                   /label= 10
FT   Peptide         299. .307
FT                   /label= 11
FT   Peptide         308. .318
FT                   /label= 12
FT   Peptide         344. .368
FT                   /label= 13
FT   Peptide         371. .386
FT                   /label= 14
FT   Peptide         372. .375
FT                   /label= 15
FT   Peptide         472. .491
FT                   /label= 16
XX
PN   USN7317407-N.
XX
PD   21-AUG-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
XX
PA   (USSH ) US NAT CANCER INST.
PA   (USDC ) US SEC OF COMMERCE.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsch H;
XX
DR   WPI; 1990-290093/38.
XX
PT   New type-IV collagenase peptide fragments - used for metallo-proteinase
PT   detection and inhibition and for producing antibodies for enzyme
PT   detection.
XX
PS   Disclosure; Fig 1; -pp; English.
XX
CC   Type IV procollagenase was purified from human A2058 melanoma cells. The
CC   complete amino acid sequence was determined (see also Hoyhtya, M. et al,
CC   (1988) FEBS Letters 233, 109-113). Based on this sequence, peptides were
CC   synthesised (see features) having homology with a histidine contg. domain
CC   at residues 371-386, a cysteine contg. domain at residues 200-370, the 80
CC   residue amino terminus or a region 159 residues from the carboxy
CC   terminus. These regions correspond to the domain of the enzyme involved
CC   in enzyme activation and interaction of the enzyme with the substrate.
CC   The peptides are useful in metalloproteinase detection and inhibition.
CC   They can be used in the treatment of inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarciodisis. The peptides can be used to
CC   produce antibodies. Peptide 6, at concn. of 0.1 mM inhibited 80% of the
CC   enzyme activity. See also US7494796-A and WO9010228. (Note: Revised entry
CC   submitted to correct the patent number format of US Government-owned NTIS
CC   applications to prevent clashes with ongoing US granted patent numbers.
CC   For further information please visit the Derwent web site at
CC   www.derwent.com/dwpi/updates/ntis_us.html.) (Updated on 25-MAR-2003 to
CC   correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89
```

```
RESULT 25
AAY07350
ID   AAY07350 standard; protein; 631 AA.
XX
AC   AAY07350;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Human type IV matrix metalloprotease protein.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 452
FT                   /note= "designated in specification as U"
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Disclosure; Fig 1; 61pp; English.
XX
CC   This sequence represents a human type IV matrix metalloprotease (MMP)
CC   zymogen (precursor protein). The invention relates to MMP inhibitor
CC   peptides which can be used to treat tissue damage caused by activated
CC   MMPs, e.g. for treating inappropriate angiogenesis, arthritis, tumour
CC   growth, invasion and metastasis and granulomatous inflammatory conditions
CC   such as sarcoidosis. Antibodies to the peptides can be used to detect the
CC   MMPs and can distinguish activated from latent enzyme. (Updated on 25-MAR
CC   -2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 26
AAW41226
ID   AAW41226 standard; protein; 631 AA.
XX
AC   AAW41226;
XX
DT   09-JUN-1998  (first entry)
XX
DE   Human mature matrix metalloprotease-2 (MMP-2) protein sequence.
XX
KW   Matrix metalloprotease-2; MMP-2; alpha-v-beta-5 antagonist; treatment;
KW   vitronectin receptor; inhibition; angiogenesis; integrin; tumour growth;
KW   restenosis; neovascularisation.
XX
OS   Homo sapiens.
XX
PN   WO9745447-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009099.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA,  Friedlander M;
XX
DR   WPI; 1998-041758/04.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta5
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Fig 16; 117pp; English.
XX
CC   The present sequence represents the mature protein of human matrix
CC   metalloprotease-2 (MMP-2). Fragments of this protein (AAW41228-33) are
CC   able to act as alpha-v-beta-5 antagonists. Alpha-v-beta-5 is a
CC   vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit
CC   angiogenesis. The specification describes a novel labelled package that
CC   contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising
CC   polypeptide that binds to integrin alpha-v-beta-5 and includes a part of
CC   the C-terminal domain of MMP. The antagonists are used to inhibit
CC   angiogenesis in inflamed tissue, in solid tumours or metastases, and in a
CC   wide range of ocular disorders (e.g. diabetic or other forms of
CC   retinopathy, neovascular glaucoma, or corneal transplants). They are
CC   particularly used to induce regression or to inhibit growth of tumours.
CC   The alpha-v-beta-5 antagonists can also be used to treat restenosis
CC   caused by migration of smooth muscle cells following angioplasty and to
CC   reduce blood supply to selected tissues. The antagonists particularly
CC   inhibit neovascularisation where this is induced by cytokines, e.g.
CC   transforming growth factor alpha, epidermal growth factor or especially
CC   vascular endothelial growth factor
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 27
ADM48668
ID   ADM48668 standard; protein; 631 AA.
XX
AC   ADM48668;
XX
DT   03-JUN-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2) protein.
XX
KW   Cancer; metastasis; matrix metalloproteinase-2; MMP-2; vaccine;
KW   immune response; gene therapy; cytostatic; enzyme; human.
XX
OS   Homo sapiens.
XX
```

```
PN   US2003139345-A1.
XX
PD   24-JUL-2003.
XX
PF   23-JAN-2003; 2003US-00350258.
XX
PR   23-JAN-2002; 2002US-0351317P.
XX
PA   (NETK/) NETKE S.
PA   (NIED/) NIEDZWIECKI A.
PA   (RATH/) RATH M.
XX
PI   Netke S,  Niedzwiecki A,  Rath M;
XX
DR   WPI; 2003-897356/82.
XX
PT   New synthetic oligopeptide, useful for blocking or treating cancer
PT   invasion and metastases in a human patient, particularly as a vaccine for
PT   treating or preventing diagnosing brain cancer, lung cancer, skin cancer
PT   or breast cancer.
XX
PS   Example 1; Fig 1; 11pp; English.
XX
CC   The present invention relates to novel synthetic oligopeptides effective
CC   in blocking cancer invasion and metastasis. The invention relates to
CC   matrix metalloproteinase-2 (MMP-2) peptides. The synthetic oligopeptides
CC   are useful as pharmaceutical compositions for blocking or treating cancer
CC   invasion and metastases in a human patient. In particular, they are
CC   useful for treating brain cancer, lung cancer, skin cancer or breast
CC   cancer. The oligopeptides are also useful as vaccines for preventing
CC   these cancers, enhancing immune response or raising antibodies for assays
CC   used to diagnose diseases involving matrix metalloproteinases or clinical
CC   monitoring of the progression or regression of disease. They are also
CC   useful in gene therapy. The present sequence is the human MMP-2 protein.
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 7;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 28
ADT05996
ID   ADT05996 standard; protein; 631 AA.
XX
AC   ADT05996;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Human mature matrix metalloprotease (MMP-2).
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; human;
KW   enzyme.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          410. .631
FT                   /note= "Corresponds to SEQ ID NO:17"
FT   Domain          439. .631
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to SEQ ID NO:18
FT   Region          439. .546
FT                   /note= "Corresponds to SEQ ID NO:20"
FT   Region          439. .512
FT                   /note= "Corresponds to SEQ ID NO:19"
FT   Region          510. .631
FT                   /note= "Corresponds to SEQ ID NO:21"
FT   Region          543. .631
FT                   /note= "Corresponds to SEQ ID NO:22"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents human mature matrix
CC   metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC   invention.
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 114;  DB 8;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 29
ADT05997
ID   ADT05997 standard; protein; 633 AA.
XX
AC   ADT05997;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Mouse mature matrix metalloprotease (MMP-2).
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
```

```
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; mouse;
KW   murine; enzyme.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   Domain          441. .633
FT                   /label = Hemopexin_domain
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents mouse mature matrix
CC   metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC   invention.
XX
SQ   Sequence 633 AA;

  Query Match             100.0%;  Score 114;  DB 8;  Length 633;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 30
AAB20490
ID   AAB20490 standard; protein; 644 AA.
XX
AC   AAB20490;
XX
DT   21-JUN-2001  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2).
XX
KW   Matrix metalloproteinase-2; MMP-2; human; pain; analgesic;
KW   nerve tissue damage; stroke; haemorrhage; reperfusion injury;
KW   cerebral ischaemia; cerebral infarction; narcotic tolerance;
KW   narcotic withdrawal.
XX
OS   Homo sapiens.
XX
PN   WO200126671-A1.
XX
PD   19-APR-2001.
XX
PF   11-OCT-2000; 2000WO-US027949.
XX
PR   12-OCT-1999;   99US-0158787P.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
PI   Romanic Arnold A,  Barone FC,  Bingham S;
XX
DR   WPI; 2001-290654/30.
DR   N-PSDB; AAF30807.
XX
PT   Polypeptide for the treatment of pain and the reduction of tissue damage
PT   comprises an inhibitor of human matrix metalloproteinase.
XX
PS   Claim 1; Fig 2; 61pp; English.
XX
CC   The present sequence is that of human matrix metalloproteinase-2 (MMP-2),
CC   previously known as 72 kDa gelatinase and gelatinase A. MMP-2 is capable
CC   of degrading the extracellular matrix components of the basement
CC   membrane. The invention relates to methods for treating pain in a patient
CC   by administering a dual inhibitor of MMP-2 and MMP-9 (see AAB20491). The
CC   administration of an inhibitor of MMP-2 is useful for treating nerve
CC   tissue damage (claimed), where the patient is suffering from a disease or
CC   disorder selected from stroke, haemorrhage, reperfusion injury, cerebral
CC   ischaemia and cerebral infarction (claimed). The method is useful for
CC   treating a disease, disorder or nerve tissue damage selected from
CC   enhanced or exaggerated sensitivity to acute pain, burn pain, atypical
CC   facial pain, neuropathic pain, back pain, complex regional pain syndrome
CC   I and II, arthritic pain, sports injury pain, pain related to virus
CC   infection, post-herpetic neuralgia, phantom limb pain, labour pain,
CC   cancer pain, post-chemotherapy pain, post-operative pain, post-stroke
CC   pain, physiological pain, inflammatory pain, acute inflammatory
CC   conditions/visceral pain, neuralgia, painful diabetic retinopathy,
CC   traumatic nerve injury, and tolerance to narcotics or withdrawal from
CC   narcotics (claimed). MMP-2 polypeptides can also be used to screen for
CC   agonist or antagonist (inhibitor) compounds
XX
SQ   Sequence 644 AA;

  Query Match             100.0%;  Score 114;  DB 4;  Length 644;
  Best Local Similarity   100.0%;  Pred. No. 4.9e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         84 PRCGNPDVANYNFFPRKPK 102


RESULT 31
AAR06420
ID   AAR06420 standard; protein; 660 AA.
XX
AC   AAR06420;
XX
DT   25-MAR-2003  (revised)
DT   13-DEC-1990  (first entry)
XX
DE   Type IV collagenase cDNA product.
XX
KW   hypertrophic scars; keloids; intervertebral disc disease; ds.
XX
OS   Homo sapiens.
XX
PN   US4923818-A.
XX
PD   08-MAY-1990.
XX
```

```
PF   15-MAY-1989;   89US-00352069.
XX
PR   15-MAY-1989;   89US-00352069.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Goldberg GL,  Eisen AZ;
XX
DR   WPI; 1990-245482/32.
DR   N-PSDB; AAQ05620.
XX
PT   Recombinant human type IV collagenase - used in treatment of hypertrophic
PT   scars, keloids and intervertebral disc disease.
XX
PS   Claim 3; Fig 9; 23pp; English.
XX
CC   cDNA clone enables production of type IV collagenase, useful in
CC   catalysing cleavage of extracellular matrix macromolecules, and in
CC   treatment of hypertrophic scars, keloids and invertebral disc disease.
CC   (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 32
AAB84607
ID   AAB84607 standard; protein; 660 AA.
XX
AC   AAB84607;
XX
DT   05-SEP-2001  (first entry)
XX
DE   Amino acid sequence of matrix metalloproteinase gelatinase A.
XX
KW   Growth factor; protein inhibitor; protease; damaged tissue;
KW   platelet-derived growth factor; PDGF; fibroblast growth factor; FGF;
KW   connective tissue derived growth factor; CTGF; chrysalin; VEGF;
KW   keratinocyte-derived growth factor; KGF; epidermal growth factor; EGF;
KW   transforming growth factor-beta; TGF-beta; matrix metalloproteinase; MMP;
KW   granulocyte macrophage colony stimulating factor; GM-CSF; uPA;
KW   vascular endothelial growth factor; urokinase plasminogen activator;
KW   dermal ulcer; wound.
XX
OS   Homo sapiens.
XX
PN   WO200149309-A2.
XX
PD   12-JUL-2001.
XX
PF   21-DEC-2000; 2000WO-IB001935.
XX
PR   29-DEC-1999;   99GB-00030768.
XX
PA   (PFIZ ) PFIZER LTD.
PA   (PFIZ ) PFIZER INC.
XX
PI   Davies MJ,  Huggins JP,  Mcintosh FS,  Occleston NL;
XX
DR   WPI; 2001-418351/44.
DR   N-PSDB; AAH28222.
XX
PT   Composition for the treatment of damaged tissue i.e. chronic wounds and
PT   dermal ulcers comprises an inhibitor agent i.e. a protease and a growth
PT   factor.
XX
PS   Disclosure; Page 552; 572pp; English.
XX
CC   The specification describes a pharmaceutical composition, comprising a
CC   growth factor, an inhibitor agent, i.e. a protease. The inhibitor agent
CC   inhibits the action of at least one specific adverse protein, i.e. a
CC   protease, that is upregulated in a damaged tissue such as a wound
CC   environment. Growth factors which are included in the composition of the
CC   invention are platelet-derived growth factor (PDGF), fibroblast growth
CC   factor (FGF), connective tissue derived growth factor (CTGF),
CC   keratinocyte-derived growth factor (KGF), transforming growth factor-beta
CC   (TGF-beta), granulocyte macrophage colony stimulating factor (GM-CSF),
CC   epidermal growth factor (EGF), vascular endothelial growth factor (VEGF),
CC   and chrysalin. Inhibitors which are included in the composition of the
CC   invention include inhibitors of urokinase-type plasminogen activator
CC   (uPA) and matrix metalloproteinase (MMP). The composition is useful for
CC   the treatment of chronic damaged tissue, i.e. wounds and dermal ulcers.
CC   The present sequence represents a human MMP-2, and is used to produce the
CC   composition of the invention
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 33
AAE10431
ID   AAE10431 standard; protein; 660 AA.
XX
AC   AAE10431;
XX
DT   10-DEC-2001  (first entry)
XX
DE   Human matrix metalloprotinase-2 (MMP-2) protein.
XX
KW   Human; matrix metalloproteinase; MMP-2; hair growth; antisense therapy;
KW   endopeptidase; skin cell; breast cancer; hair follicle; chromosome 11q22.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide          1. .27
FT                    /label= Signal_peptide
FT   Protein          28. .660
FT                    /label= Mature_MMP_2_protein
FT   Domain           100. .106
FT                    /label= Cysteine_switch_domain
FT   Domain           171. .195
FT                    /note= "Zinc and calcium binding domain"
XX
PN   WO200166766-A2.
XX
PD   13-SEP-2001.
XX
PF   06-MAR-2001; 2001WO-US007167.
XX
PR   06-MAR-2000; 2000US-0187196P.
XX
PA   (DARW-) DARWIN MOLECULAR CORP.
PA   (SCHA/) SCHATZMAN R.
XX
PI   Fajardo M,  Wang K,  Smith R,  Moss P;
XX
DR   WPI; 2001-582276/65.
XX
PT   Novel isolated matrix metalloproteinase-25 nucleic acid molecule and
PT   proteins encoded by them whose inhibition is useful for modulation of
PT   hair growth in mammals.
```

XX
PS Example 2; Fig 3; 119pp; English.
XX
CC The present sequence is human matrix metalloproteinase (MMP)-2 protein
CC used in the exemplification of the invention. MMP-25 DNA is located on
CC chromosome 11q22. Matrix metalloproteinases are a family of zinc
CC dependent endopeptidases that function extracellularly to degrade
CC proteins typically found in the extracellular matrix. MMP-25 is expressed
CC in skin cells of mammals, particularly in breast cells and hair
CC follicles. MMP-25 DNA is useful for identifying a nucleic acid molecule
CC encoding all or part of MMP by hybridising MMP-25 to a nucleic acid
CC sample and identifying a sequence that hybridises in the nucleic acid
CC sample. The identification step involves performing polymerase chain
CC reaction (PCR) to amplify the hybridising sequence. MMP-25 antibody is
CC useful for identifying type 25 MMP. MMP-25 protein inhibitors may be used
CC to modulate hair growth and breast cancer in a mammal
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 4; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 34
ABB79413
ID ABB79413 standard; protein; 660 AA.
XX
AC ABB79413;
XX
DT 08-JUL-2002 (first entry)
XX
DE Human matrix metalloproteinase 2 protein.
XX
KW Human; matrix metalloproteinase-2; MMP-2; enzyme; thrombolytic;
KW anticoagulant; cardiant; antiarteriosclerotic; cytostatic; osteopathic;
KW antiinflammatory; antibacterial; virucide; fungicide; antipsoriatic;
KW vulnerary; cerebroprotective; antianginal; ophthalmological;
KW antirheumatic; antiarthritic; antiulcer; vasotropic; nephrotropic;
KW alpha-v-beta-3 integrin receptor; thrombosis; tumour; osteoporosis;
KW infection; veterinary medicine; rheumatoid arthritis; Crohn's disease;
KW antimicrobial; antiseptic.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 466. .660
FT /label= PEX
FT Binding-site 489. .497
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 570. .585
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 588. .597
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
XX
PN WO200220566-A2.
XX
PD 14-MAR-2002.
XX
PF 28-AUG-2001; 2001WO-EP009899.
XX
PR 07-SEP-2000; 2000DE-01044325.
XX
PA (MERE) MERCK PATENT GMBH.
XX
PI Jonczyk A, Diefenbach B, Groth U, Zischinsky G;
XX
DR WPI; 2002-329868/36.
XX
PT New matrix metalloprotease-2 derivative peptides, are alpha-v-beta-3
PT integrin receptor inhibitors useful e.g. for treating thrombosis, cardiac
PT infarction, tumors, osteoporosis, inflammation or infections.
XX
PS Disclosure; Page 11; 35pp; German.
XX
CC The invention relates to peptides (ABB79414-ABB79426) derived from the C-
CC terminal fragment PEX of matrix metalloprotease-2 (MMP-2). Matrix MMP-2
CC derivatives of formula X-Y-Z (I) and their salts and solvates are
CC described. X = H, 1-10C alkanoyl or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues; Y = peptide fragment selected
CC from the sequence region 466-660 of human Pro-MMP-2; and Z = OH, NH_2, NH
CC -1-10C alkyl N(1-10C alkyl)_2 or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues. Primary amino groups are
CC optionally protected conventionally. The peptides and MMP-2 derivatives
CC are used for combating diseases involving interaction of ligands
CC (specifically MMP-2) with the alpha-v-beta-3 integrin receptor,
CC especially pathological processes supported or propagated by
CC angiogenesis, thrombosis, cardiac infarction, coronary heart disease,
CC arteriosclerosis, tumours, osteoporosis, fibrosis, inflammation,
CC infections, psoriasis or wound healing deficiency. More generally the
CC peptides and MMP-2 derivatives are useful in human and veterinary
CC medicine for the treatment and/or prophylaxis of thrombosis, myocardial
CC infarction, apoplexy, angina pectoris, tumour diseases, osteolytic
CC diseases (e.g. osteoporosis or hypercalcaemia), pathological angiogenic
CC diseases (e.g. inflammation), ophthalmological diseases (e.g. diabetic
CC retinopathy, macular degeneration, myopia, ocular histoplasmosis or
CC rubeotic glaucoma), rheumatoid arthritis, osteoarthritis, ulcerative
CC colitis, Crohn's disease, atherosclerosis, psoriasis, restenosis after
CC angioplasty, viral, bacterial or fungal infections, acute renal failure
CC or wound healing deficiency; as antimicrobial/antiseptic agents in
CC operations involving biomaterials, implants, catheters or cardiac
CC pacemakers); or as diagnostic agents or reagents. The present sequence is
CC that of the human MMP-2 protein
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 35
ABB90738
ID ABB90738 standard; protein; 660 AA.
XX
AC ABB90738;
XX
DT 30-MAY-2002 (first entry)
XX
DE Human Tumour Endothelial Marker polypeptide SEQ ID NO 208.
XX
KW Human; mouse; rat; TEM; tumour endothelial marker; NEM; PEM; cytostatic;
KW normal endothelial marker; pan-endothelial marker; immunostimulant;
KW antiangiogenic; tumour; neoangiogenesis; vascularised tumour;
KW polycystic kidney disease; diabetes; retinopathy; rheumatoid arthritis;
KW psoriasis.
XX
OS Homo sapiens.
XX
PN WO200210217-A2.
XX
PD 07-FEB-2002.
XX
PF 01-AUG-2001; 2001WO-US024031.
XX
PR 02-AUG-2000; 2000US-0222599P.
PR 11-AUG-2000; 2000US-0224360P.
PR 11-APR-2001; 2001US-0282850P.

XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI St Croix B, Kinzler KW, Vogelstein B;
XX
DR WPI; 2002-291856/33.
DR N-PSDB; ABL92092.
XX
PT An isolated molecule comprising an antibody variable region which
PT specifically binds to an extracellular domain of a tumor endothelial
PT marker (TEM) protein, useful for inhibiting tumor growth.
XX
PS Claim 54; Page 166-168; 331pp; English.
XX
CC The invention relates to an isolated molecule comprising an antibody
CC variable region which specifically binds to an extracellular domain of a
CC tumour endothelial marker (TEM) protein selected from ABB90732, ABB90740,
CC ABB90749, ABB90750 and ABB90769. The antibodies which bind to TEM
CC proteins have cytostatic, immunostimulant and antiangiogenic activity.
CC They are useful for inhibiting tumour growth, neoangiogenesis in subjects
CC bearing a vascularised tumour, polycystic kidney disease, diabetic
CC retinopathy, rheumatoid arthritis and psoriasis. Human, mouse and rat TEM
CC genes and the encoded proteins (ABL92075-ABL92141 and ABB90721-ABB90789)
CC are disclosed, as are marker oligonucleotide sequences: tumour
CC endothelial markers (TEM) ABL91996-ABL92041 and ABL92143-ABL92191; normal
CC endothelial markers (NEM) ABL92042-ABL92074; and pan-endothelial markers
CC (PEM) ABL91903-ABL91995
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 36
AAU84348
ID AAU84348 standard; protein; 660 AA.
XX
AC AAU84348;
XX
DT 08-MAY-2002 (first entry)
XX
DE Protein MMP2 differentially expressed in breast cancer tissue.
XX
KW Human; diagnosis of breast cancer; endometrial cancer; breast tumour;
KW MAI; mitotic activity index; cytostatic.
XX
OS Homo sapiens.
XX
PN WO200210436-A2.
XX
PD 07-FEB-2002.
XX
PF 27-JUL-2001; 2001WO-US023642.
XX
PR 28-JUL-2000; 2000US-0222093P.
XX
PA (BGHM) BRIGHAM & WOMENS HOSPITAL INC.
PA (BAAK/) BAAK J.
XX
PI Baak J, Mutter GL;
XX
DR WPI; 2002-180084/23.
DR N-PSDB; ABK35568.
XX
PT Diagnosing breast cancer comprises determining expression of nucleic acid
PT molecules or expression products that are differentially expressed in
PT normal and malignant tissue.
XX
PS Claim 37; Page 185-187; 219pp; English.
XX
CC The present invention relates to a method for diagnosing breast cancer in
CC a subject suspected of having endometrial cancer. The method comprises
CC determining the expression of a set of human genes or expression products
CC in an endometrial sample suspected of being cancerous. The human genes of
CC the invention are differentially expressed in breast tumours
CC characterised as high or low MAI (mitotic activity index). These sets of
CC genes can be used to discriminate between high and low MAI breast
CC tumours. The invention also provides DNA and protein microarrays for
CC analysing the expression of the human genes and their protein products.
CC The methods and arrays are useful for the diagnosis and prognosis of
CC endometrial cancer, selecting and monitoring treatment regimes, and
CC identification of compounds useful for the treatment of endometrial
CC cancer. AAU84311-AAU84361 represent the human proteins of the invention
CC that are differentially expressed in breast cancer tissue
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 37
ABU54445
ID ABU54445 standard; protein; 660 AA.
XX
AC ABU54445;
XX
DT 12-MAR-2003 (first entry)
XX
DE Human tumour endothelial marker TEM 7.
XX
KW Human; endothelial cell; EC; tumour endothelial cell; TEM; NEM;
KW Tumour endothelial marker; normal endothelial marker; PEM;
KW pan-endothelial marker; polycystic kidney disease; psoriasis;
KW diabetic retinopathy; rheumatoid arthritis; tumour angiogenesis;
KW neoangiogenesis; immune response; cytostatic; antidiabetic;
KW ophthalmological; antirheumatic; antiarthritic; antipsoriatic.
XX
OS Homo sapiens.
XX
PN WO200283874-A2.
XX
PD 24-OCT-2002.
XX
PF 10-APR-2002; 2002WO-US008253.
XX
PR 11-APR-2001; 2001US-0282850P.
PR 06-FEB-2002; 2002US-0354262P.
XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI Carson-Walter E, St Croix B, Kinzler KW, Vogelstein B;
XX
DR WPI; 2003-093016/08.
DR N-PSDB; ABX72017.
XX
PT New purified human transmembrane protein, designated as tumor endothelial
PT marker (TEM) 3, useful for detecting, diagnosing or treating tumors,
PT polycystic kidney disease, diabetic retinopathy, rheumatoid arthritis or
PT psoriasis.
XX
PS Disclosure; Page 173-174; 374pp; English.
XX
CC The present invention relates to a novel method for the isolation of
CC endothelial cells (ECs), and the identification of genes expressed in

```
CC   normal and tumour ECs. Tumour endothelial marker (TEM), normal
CC   endothelial marker (NEM), and pan-endothelial marker (PEM) genes are
CC   identified in human ECs. The human EC marker proteins and the
CC   polynucleotide sequences encoding them are useful for detecting,
CC   diagnosing or treating tumours as well as polycystic kidney disease,
CC   diabetic retinopathy, rheumatoid arthritis, and psoriasis. They are also
CC   useful for inhibiting neoangiogenesis or tumour angiogenesis, for
CC   inducing an immune response to tumour endothelial cells in a patient, or
CC   for identifying candidate drugs for treating tumours. The present
CC   sequence represents a human TEM or NEM protein of the invention
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 38
ABP97136
ID   ABP97136 standard; protein; 660 AA.
XX
AC   ABP97136;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 protein SEQ ID NO:14.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW   macular degeneration; diabetic retinopathy; cleavage region.
XX
OS   Homo sapiens.
XX
PN   WO2003018748-A2.
XX
PD   06-MAR-2003.
XX
PF   15-AUG-2002; 2002WO-US026319.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Weart IF;
XX
DR   WPI; 2003-381408/36.
XX
PT   Anti-angiogenic composition comprising peptide inhibitor of matrix
PT   metalloproteinase, useful for decreasing the expression of vascular
PT   endothelial growth factor and treating cancers and tissue injuries.
XX
PS   Example 1; Page 43-44; 103pp; English.
XX
CC   The present invention describes an anti-angiogenic composition (I) for
CC   inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC   comprises an effective amount of a peptide inhibitor of matrix
CC   metalloproteinase (MMP), where the peptide can inhibit the expression of
CC   VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC   antidiabetic, ophthalmological and dermatological activities. (I) can be
CC   used for inhibiting expression of VEGF, and so can be used for inhibiting
CC   growth of tumours and diminishing tumours size. The tumour can be
CC   metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC   (I) is also useful for treating injuries including wounds, surgical
CC   incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC   for treating disorders characterised by excessive angiogenesis e.g.
CC   macular degeneration and diabetic retinopathy. The present sequence
CC   represents the human MMP-2 protein, which is used in the exemplification
CC   of the present invention
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 39
AAO16608
ID   AAO16608 standard; protein; 660 AA.
XX
AC   AAO16608;
XX
DT   08-MAY-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 (MMP2) gelatinase protein.
XX
KW   Human; enzyme; crystalline polypeptide; matrix metalloproteinase 9; MMP9;
KW   gelatinase; metalloproteinase mediated disease; drug design; arthritis;
KW   three-dimensional structure; MMP9 inhibitor; tumour growth;
KW   cancer metastasis; osteoarthritis; atherosclerosis; restenosis;
KW   periodontitis; multiple sclerosis; glomerulonephritis; MMP9 modulator;
KW   graft-versus-host disease; non-insulin dependent diabetes; MMP2;
KW   matrix metalloproteinase 2.
XX
OS   Homo sapiens.
XX
PN   WO2003002729-A1.
XX
PD   09-JAN-2003.
XX
PF   24-JUN-2002; 2002WO-SE001266.
XX
PR   27-JUN-2001; 2001SE-00002298.
XX
PA   (ASTR ) ASTRAZENECA AB.
XX
PI   Jepson H,  Minshull C,  Pauptit R,  Rowsell S;
XX
DR   WPI; 2003-201502/19.
XX
PT   Novel crystalline form of a polypeptide corresponding to the catalytic
PT   domain of matrix metalloproteinase 9 protein, useful for selecting or
PT   designing chemical modulators which are used for treating diabetes,
PT   cancer, arthritis.
XX
PS   Disclosure; Fig 7; 227pp; English.
XX
CC   The invention comprises a crystalline form of a polypeptide corresponding
CC   to the catalytic domain of matrix metalloproteinase 9 (MMP9) protein - a
CC   gelatinase. The crystalline polypeptide of the invention is useful for
CC   treating a metalloproteinase mediated disease or condition in a warm-
CC   blooded animal. The crystalline polypeptide is also useful for
CC   determining the three-dimensional structure of the MMP9 catalytic domain
CC   to high resolution. The three-dimensional structure of the MMP9 catalytic
CC   domain is useful for rational drug design, and the atomic coordinates of
CC   the catalytic domain of MMP9 are useful for selecting or designing
CC   chemical modulators (preferably inhibitors) of MMP9. The crystalline
CC   polypeptide of the invention is useful in the treatment of a
CC   metalloproteinase mediated disease or condition, such as: tumour growth;
CC   metastasis in cancer; arthritis; osteoarthritis; atherosclerosis;
CC   restenosis; periodontitis; multiple sclerosis; glomerulonephritis; graft-
```

```
CC   versus-host disease; and non-insulin dependent diabetes. The present
CC   amino acid sequence represents a human matrix metalloproteinase 2 (MMP2)
CC   protein
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 40
ABG76322
ID   ABG76322 standard; protein; 660 AA.
XX
AC   ABG76322;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2).
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
KW   skin tone; wrinkle; anti-aging; vulnerary.
XX
OS   Homo sapiens.
XX
PN   WO2003016520-A1.
XX
PD   27-FEB-2003.
XX
PF   15-AUG-2002; 2002WO-US026198.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Malik S,  Villanueva JM;
XX
DR   WPI; 2003-289980/28.
XX
PT   Novel peptide inhibitor of proteinase activity of matrix
PT   metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT   stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS   Example 1; Page 41-42; 120pp; English.
XX
CC   The present invention relates to peptide inhibitors of metalloproteinases
CC   (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC   peptide sequences related to the cleavage regions of the proenzyme forms
CC   of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC   proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC   development, treating wounds, preventing scarring, improving skin tone,
CC   reducing wrinkling and for simulating the development of smooth, healthy
CC   skin. The peptide inhibitors are useful as anti-aging and wound healing
CC   compounds. The present sequence represents human MMP-2
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 41
ADD18578
ID   ADD18578 standard; protein; 660 AA.
XX
AC   ADD18578;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Human disease related protein SeqID9.
XX
KW   human; disease state; cytostatic; antiinflammatory; ophthalmological;
KW   antiarteriosclerotic; vulnerary; gene therapy;
KW   hypoxia-regulated condition; tumourigenesis; angiogenesis; apoptosis;
KW   inflammation; erythropoiesis; glycolysis; gluconeogenesis;
KW   glucose transportation; catecholamine synthesis; iron transport;
KW   nitric oxide synthesis; cancer; ischaemic condition; reperfusion injury;
KW   retinopathy; neonatal stress; pre-eclampsia; atherosclerosis;
KW   inflammatory condition; wound healing.
XX
OS   Homo sapiens.
XX
PN   WO2003018621-A2.
XX
PD   06-MAR-2003.
XX
PF   23-AUG-2002; 2002WO-GB003892.
XX
PR   23-AUG-2001; 2001GB-00020558.
PR   05-OCT-2001; 2001GB-00024037.
XX
PA   (OXFO-) OXFORD BIOMEDICA UK LTD.
XX
PI   Kingsman SM,  White J,  Ward NR,  Harris RA,  Naylor S,  Mundy CR;
XX
DR   WPI; 2003-290046/28.
DR   N-PSDB; ADD18579.
XX
PT   New substantially purified polypeptide, useful for diagnosing or treating
PT   a hypoxia-regulated condition, such as cancer, ischemia, reperfusion
PT   injury, retinopathy, pre-eclampsia, atherosclerosis, inflammation, or
PT   wound healing.
XX
PS   Claim 25; SEQ ID NO 9; 424pp; English.
XX
CC   This invention relates to novel human genes and gene product which are
CC   implicated in certain disease states. Compounds which modulate the
CC   proteins of the invention may have cytostatic, antiinflammatory,
CC   ophthalmological, antiarteriosclerotic or vulnerary activities. The
CC   sequences of the invention may be useful for gene therapy. The invention
CC   may be useful for diagnosing or treating a hypoxia-regulated condition,
CC   such as tumourigenesis, angiogenesis, apoptosis, inflammation,
CC   erythropoiesis, or the biological response to hypoxia conditions
CC   including processes such as glycolysis, gluconeogenesis, glucose
CC   transportation, catecholamine synthesis, iron transport or nitric oxide
CC   synthesis. The disease includes cancer, ischaemic conditions, reperfusion
CC   injury, retinopathy, neonatal stress, pre-eclampsia, atherosclerosis,
CC   inflammatory conditions or wound healing. The present sequence is that of
CC   a disease related protein of the invention.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 114;  DB 7;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 42
```

ADP65244
ID ADP65244 standard; protein; 660 AA.
XX
AC ADP65244;
XX
DT 12-AUG-2004 (first entry)
XX
DE Human matrix metalloproteinase 2 preproprotein, gelatinase A, 72kD type.
XX
KW autoimmune disease; arthritide; gene expression analysis;
KW rheumatoid arthritis; collagen-induced; immunosuppressive; antirheumatic;
KW antiarthritic; osteopathic; antigout; antiinflammatory; dermatological;
KW immunomodulatory; lupus; ankylosing spondylitis; Fibrositis;
KW fibromyalgia; osteoarthritis; gout; juvenile rheumatoid arthritis;
KW immune; human.
XX
OS Homo sapiens.
XX
PN WO2003072827-A1.
XX
PD 04-SEP-2003.
XX
PF 31-OCT-2002; 2002WO-US035433.
XX
PR 31-OCT-2001; 2001US-0336220P.
XX
PA (CHIL-) CHILDREN'S HOSPITAL MEDICAL CENT.
XX
PI Hirsch R, Thorton SL;
XX
DR WPI; 2003-712740/67.
DR GENBANK; NP_004521.
XX
PT Diagnosing and analyzing autoimmune disease using gene expression
PT profiles and microarray technology, useful for diagnosing and treating
PT rheumatoid arthritis, lupus, fibrositis, osteoarthritis, fibromyalgia and
PT gout.
XX
PS Disclosure; Page; 56pp; English.
XX
CC The invention relates to a novel method for diagnosing and analysing
CC autoimmune disease or arthritides. The method comprises obtaining a
CC patient sample containing mRNA, analysing gene expression using the mRNA
CC that results in a gene expression signature of the mRNA, and using that
CC gene expression signature to diagnose or analyse the autoimmune disease
CC or arthritides in the patient, where gene expression of at least 60% of
CC the genes correlates with that of the gene signature. The invention
CC further comprises: a treatment of rheumatoid arthritis; identification of
CC genes for targeting in the treatment of rheumatoid arthritis in a mammal
CC other than a mouse; diagnosis of rheumatoid arthritis in a mammal; an
CC array or gene chip, specific for rheumatoid arthritis; diagnosis or
CC analyses of autoimmune disease or rheumatoid arthritis; screening the
CC efficacy of a candidate drug in vitro for the treatment of collagen-
CC induced arthritis; and reducing the symptoms associated with collagen-
CC induced arthritis. The compositions of the invention have the following
CC activities: immunosuppressive, antirheumatic, antiarthritic, osteopathic,
CC antigout, antiinflammatory, dermatological, and immunomodulatory. The
CC methods and compositions of the present invention are useful for
CC diagnosing and treating autoimmune disease or arthritides, such as
CC rheumatoid arthritis, lupus, ankylosing spondylitis, fibrositis,
CC fibromyalgia, osteoarthritis, gout, juvenile rheumatoid arthritis, and an
CC immune disease caused by an infectious agent. This sequence represents a
CC protein sequence relating to the genes used in the analysis and treatment
CC of autoimmune diseases or arthritides. Note: This sequence is not shown
CC in the specification. It has been supplied in an electronic format from
CC WIPO.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 43
ADN07697
ID ADN07697 standard; protein; 660 AA.
XX
AC ADN07697;
XX
DT 01-JUL-2004 (first entry)
XX
DE Human matrix matalloproteinase 2 protein.
XX
KW Protease; stem cell; bone marrow failure disorder; aplastic anaemia;
KW myeloproliferative disorder; multiple myeloma; gene therapy; human;
KW matrix metalloproteinase; MMP; enzyme.
XX
OS Homo sapiens.
XX
PN US2004071687-A1.
XX
PD 15-APR-2004.
XX
PF 28-MAY-2003; 2003US-00447315.
XX
PR 28-MAY-2002; 2002US-0383658P.
XX
PA (RAFI/) RAFII S.
PA (HEIS/) HEISSIG B.
PA (HATT/) HATTORI K.
XX
PI Rafii S, Heissig B, Hattori K;
XX
DR WPI; 2004-328523/30.
DR N-PSDB; ADN07698.
DR GENBANK; 11342666.
XX
PT Recruiting adult stem cells in an animal for treating aplastic anemia or
PT multiple myeloma by administering a protease or its activator so that the
PT stem cells can proliferate, self-renew, differentiate or mobilize to a
PT target site.
XX
PS Disclosure; SEQ ID NO 3; 77pp; English.
XX
CC The present invention relates to the use of proteases to recruit stem
CC cells from the niches they normally occupy. The invention is useful for
CC recruiting adult stem cells for treating bone marrow failure disorder
CC such as aplastic anaemia and myeloproliferative disorder such as multiple
CC myeloma. The invention is also useful in gene therapy. The present
CC sequence is human matrix metalloproteinase (MMP) protein.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 8; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 44
ADQ17097
ID ADQ17097 standard; protein; 660 AA.
XX
AC ADQ17097;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) protein.

XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Example 1; SEQ ID NO 14; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase-2 (MMP2) protein. This sequence is used in the
CC exemplification of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 8; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 45
ADV90301
ID ADV90301 standard; protein; 660 AA.
XX
AC ADV90301;
XX
DT 10-MAR-2005 (first entry)
XX
DE Protease-hydrolysed polypeptide #78.
XX
KW Protease; immune disorder; inflammation; musculoskeletal disease;
KW dermatological disease; gastrointestinal disease; endocrine disease;
KW metabolic disorder; cancer; hematological disease;
KW cardiovascular disease; neurological disease; neurodegenerative disease;
KW growth disorder; respiratory disease; genitourinary disease;
KW gynecological disorder; nutritional disorder; infection; cytostatic;
KW gastrointestinal-gen.; antiinflammatory; antiasthmatic; analgesic;
KW antiarthritic; osteopathic; antidiabetic; nephrotropic;
KW cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipsoriatic;
KW antiallergic; dermatological; enzyme; hydrolysis.
XX
OS Homo sapiens.
XX
PN WO2004113522-A1.
XX
PD 29-DEC-2004.
XX
PF 18-JUN-2004; 2004WO-EP051173.
XX
PR 18-JUN-2003; 2003EP-00013819.
PR 10-NOV-2003; 2003EP-00025851.
PR 11-NOV-2003; 2003EP-00025871.
PR 11-FEB-2004; 2004EP-00003058.
XX
PA (DIRE-) DIREVO BIOTECH AG.
XX
PI Haupts U, Koltermann A, Scheidig A, Voetsmeier C, Kettling U;
XX
DR WPI; 2005-057985/06.
XX
PT Proteases with defined specificity for a target substrate useful for
PT treating a specific disease related to the target substrate, such as
PT cancer, asthma, diabetes, inflammatory disorders and psoriasis.
XX
PS Claim 43; SEQ ID NO 131; 250pp; English.
XX
CC The invention relates to the use of a protease with defined specificity
CC for a target substrate for preparing a medicament for the treatment of a
CC specific disease related to the target substrate. The invention also
CC relates to a pharmaceutical or diagnostic composition comprising one or
CC more enzymes in the use cited, optionally comprising pharmaceutically or
CC diagnostically acceptable carriers, excipients and/or auxiliary agents, a
CC method for cleaving a target substrate in vivo or in vitro comprising
CC contacting the target substrate with a protease as cited in the use
CC mentioned, and a method for treatment of a disease in a patient connected
CC with a specific target substrate comprising administering to the patient
CC a protease with defined specificity for the specific target substrate.
CC The protease hydrolyzes the target substrate and eliminates or reduces
CC one or more biological activities, physico-chemical properties or
CC pharmacological properties of the target protein and/or activates or
CC increases one or more biological activities, physico-chemical properties
CC or pharmacological properties of the target protein, and/or adds one or
CC more biological activities, physico-chemical properties or
CC pharmacological properties to the target protein. The protease may be
CC administered to treat immune disorders, inflammatory disorders,
CC musculoskeletal diseases, dermatological diseases, gastrointestinal
CC diseases, endocrine diseases, metabolic disorder, cancers, hematological
CC diseases, cardiovascular diseases, neurological diseases,
CC neurodegenerative diseases, growth disorders, respiratory diseases,
CC genitourinary diseases, gynecological disorders, nutritional disorders
CC and infections. This sequence represents a polypeptide hydrolysed by a
CC protease used in the scope of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 9; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 46
ADV68478
ID ADV68478 standard; protein; 660 AA.
XX
AC ADV68478;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 protein SeqID14.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;

KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Example 1; SEQ ID NO 14; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a human matrix metalloproteinase which may be used during the
CC development of a composition of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 114; DB 9; Length 660;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 47
ADE62857
ID ADE62857 standard; protein; 662 AA.
XX
AC ADE62857;
XX
DT 29-JAN-2004 (first entry)
XX
DE Rat Protein P33436, SEQ ID NO 8791.
XX
KW Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
OS Rattus norvegicus.
XX
PN WO2003016475-A2.
XX
PD 27-FEB-2003.
XX
PF 14-AUG-2002; 2002WO-US025765.
XX
PR 14-AUG-2001; 2001US-0312147P.
PR 01-NOV-2001; 2001US-0346382P.
PR 26-NOV-2001; 2001US-0333347P.
XX
PA (GEHO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
XX
PI Woolf C, D'urso D, Befort K, Costigan M;
XX
DR WPI; 2003-268312/26.
DR GENBANK; P33436.
XX
PT New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
XX
PS Claim 1; Page; 1017pp; English.
XX
CC The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC that is differentially expressed in neuronal tissue of a first animal
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC therapy). The sequence presented is a rat protein (shown in Table 2 of
CC the specification) which is differentially expressed during pain. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic form directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 662 AA;

Query Match 100.0%; Score 114; DB 7; Length 662;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 48
ADD46270
ID ADD46270 standard; protein; 662 AA.
XX
AC ADD46270;
XX
DT 29-JAN-2004 (first entry)
XX
DE Rat Protein P33436, SEQ ID NO 11945.
XX
KW Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX

```
OS   Rattus norvegicus.
XX
PN   WO2003016475-A2.
XX
PD   27-FEB-2003.
XX
PF   14-AUG-2002; 2002WO-US025765.
XX
PR   14-AUG-2001; 2001US-0312147P.
PR   01-NOV-2001; 2001US-0346382P.
PR   26-NOV-2001; 2001US-0333347P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
PA   (FARB ) BAYER AG.
XX
PI   Woolf C,  D'urso D,  Befort K,  Costigan M;
XX
DR   WPI; 2003-268312/26.
DR   GENBANK; P33436.
XX
PT   New composition comprising two or more isolated polypeptides, useful for
PT   preparing a medicament for treating pain in an animal.
XX
PS   Claim 1; Page; 1017pp; English.
XX
CC   The invention discloses a composition comprising two or more isolated rat
CC   or human polynucleotides or a polynucleotide which represents a fragment,
CC   derivative or allelic variation of the nucleic acid sequence. Also
CC   claimed are a vector comprising the novel polynucleotide, a host cell
CC   comprising the vector, a method for identifying a nucleotide sequence
CC   which is differentially regulated in an animal subjected to pain and a
CC   kit to perform the method, an array, a method for identifying an agent
CC   that increases or decreases the expression of the polynucleotide sequence
CC   that is differentially expressed in neuronal tissue of a first animal
CC   subjected to pain, a method for identifying a compound which regulates
CC   the expression of a polynucleotide sequence which is differentially
CC   expressed in an animal subjected to pain, a method for identifying a
CC   compound that regulates the activity of one or more of the
CC   polynucleotides, a method for producing a pharmaceutical composition, a
CC   method for identifying a compound or small molecule that regulates the
CC   activity in an animal of one or more of the polypeptides given in the
CC   specification, a method for identifying a compound useful in treating
CC   pain and a pharmaceutical composition comprising the one or more
CC   polypeptides or their antibodies. The polynucleotide or the compound that
CC   modulates its activity is useful for preparing a medicament for treating
CC   pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC   injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC   therapy). The sequence presented is a rat protein (shown in Table 2 of
CC   the specification) which is differentially expressed during pain. Note:
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic form directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 662 AA;

  Query Match             100.0%;  Score 114;  DB 7;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 49
AAW41111
ID   AAW41111 standard; protein; 663 AA.
XX
AC   AAW41111;
XX
DT   08-JUN-1998  (first entry)
XX
DE   Chicken matrix metalloproteinase-2.
XX
KW   Matrix metalloproteinase-2; MMP-2; chMMP-2; chicken; Angiogenesis;
KW   inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor;
KW   rheumatoid arthritis; tumour; metastasis; diabetic retinopathy;
KW   macular degeneration; restenosis; therapy.
XX
OS   Gallus sp.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Sig_peptide
XX
PN   WO9745137-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009158.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA;
XX
DR   WPI; 1998-032334/03.
DR   N-PSDB; AAV03995.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta3
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Page 163-167; 234pp; English.
XX
CC   This protein sequence comprises chicken matrix metalloproteinase-2 (chMMP
CC   -2). The invention relates to the discovery that angiogenesis is mediated
CC   by the specific vitronectin receptor alpha-v beta-3, and that inhibition
CC   of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of
CC   alpha-v beta-3 include C-terminal fragments (see AAW41083-94) of human or
CC   chicken MMP-2. An MMP-2 fragment can be obtained by recombinant DNA
CC   methods, such as PCR amplification of the chMMP-2 coding region, cloning
CC   into e.g. pGEX-3X, and expression in E. coli as a fusion protein with
CC   glutathione-S-transferases. The antagonists can be used to inhibit
CC   angiogenesis in inflammed tissue (for treatment of arthritis or
CC   rheumatoid arthritis), in solid tumours or metastases (particularly to
CC   induce regression or inhibit tumour growth), and in ocular disorders such
CC   as diabetic retinopathy and macular degeneration, as well as to treat
CC   restenosis (all claimed)
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 114;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 50
ADT05976
ID   ADT05976 standard; protein; 663 AA.
XX
AC   ADT05976;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #1, SEQ ID NO:30.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
```

```
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Asp-Ser-His-Phe in the chicken
FT                   MMP-2 shown in figure 7"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
DR   N-PSDB; ADT05975.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; SEQ ID NO 30; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents chicken matrix metalloprotease 2
CC   (MMP-2, gelatinase) used in an example of the invention. Note: The
CC   present sequence differs between residues 202-205 compared to the
CC   sequence also described as chicken MMP-2 shown in figure 7A-7C
CC   (ADT05995).
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 114;  DB 8;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 51
ADT05995
ID   ADT05995 standard; protein; 663 AA.
XX
AC   ADT05995;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #2.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Ser-His-Phe-Asp in the chicken
FT                   MMP-2 shown in SEQ ID NO:30"
FT   Misc-difference 202
FT                   /note= "Encoded by TCC"
FT   Misc-difference 203
FT                   /note= "Encoded by CAT"
FT   Misc-difference 204
FT                   /note= "Encoded by TTT"
FT   Misc-difference 205
FT                   /note= "Encoded by GAT"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
```

XX
PD 14-OCT-2004.
XX
PF 26-MAR-2004; 2004WO-US009321.
XX
PR 28-MAR-2003; 2003US-00402212.
XX
PA (SCRI) SCRIPPS RES INST.
XX
PI Brooks PC, Cheresh DA;
XX
DR WPI; 2004-737508/72.
DR N-PSDB; ADT05994.
XX
PT Administration of composition comprising organic peptidomimetic alpha-v
PT beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS Example 2; Fig 7A-C; 184pp; English.
XX
CC The invention relates to a method of inhibiting angiogenesis in a tissue
CC by the administration of a composition comprising an organic
CC peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC receptor). The integrin alpha-V beta-3 antagonist and compositions
CC containing it are useful for inhibiting angiogenesis in a variety of
CC medical conditions. The antagonist may be used to induce the regression
CC of solid tumours or solid tumour metastases; to inhibit the growth of
CC solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC treat neovascularisation in retinal tissue (e.g., in diabetic
CC retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC cell migration (such as that which occurs following angioplasty); and to
CC reduce the blood supply to a tissue required to support new growth of the
CC tissue. The present sequence represents chicken matrix metalloprotease 2
CC (MMP-2, gelatinase) used in an example of the invention. Note: The
CC present sequence differs between residues 202-205 compared to the
CC sequence also described as chicken MMP-2 shown in the sequence listing
CC (ADT05976)
XX
SQ Sequence 663 AA;

Query Match 100.0%; Score 114; DB 8; Length 663;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 97 PRCGNPDVANYNFFPRKPK 115

RESULT 52
ADF60554
ID ADF60554 standard; protein; 708 AA.
XX
AC ADF60554;
XX
DT 12-FEB-2004 (first entry)
XX
DE Human contig polypeptide sequence SEQ ID NO:2921.
XX
KW biological activity; genetic engineering; hybridisation probe; oligomer;
KW primer; chromosome mapping; gene mapping; recombinant protein production;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003080795-A2.
XX
PD 02-OCT-2003.
XX
PF 09-AUG-2002; 2002WO-US025485.
XX
PR 09-AUG-2001; 2001US-0311261P.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Yang Y, Wang Z, Weng G, Ma Y;
XX
DR WPI; 2003-876918/81.
DR N-PSDB; ADF60102.
XX
PT New polynucleotides, useful as hybridization probes, oligomers or
PT primers, for chromosome or gene mapping, for the recombinant production
PT of proteins, and for generating antisense DNA or RNA.
XX
PS Example 3; SEQ ID NO 2921; 571pp; English.
XX
CC The present invention describes isolated polynucleotide sequences (I),
CC which encode polypeptides (II) with biological activity. Also described:
CC (1) a vector comprising (I); (2) an expression vector comprising (I); (3)
CC a host cell genetically engineered to comprise (I) which is operatively
CC associated with a regulatory sequence that modulates expression of (I) in
CC the host cell; (4) a polypeptide (II) encoded by (I); (5) a composition
CC comprising the polypeptide of (4) and a carrier; (6) an antibody directed
CC against the polypeptide of (4); (7) detecting (I) or the polypeptide of
CC (4) in a sample; (8) identifying a compound that binds to the polypeptide
CC of (4); (9) producing the polypeptide of (4); and (10) a collection of
CC polynucleotides comprising at least one of the polynucleotide sequences
CC (I). The polynucleotides (I) can be used as hybridisation probes,
CC oligomers or primers, for chromosome or gene mapping, for the recombinant
CC production of proteins, and for generating antisense DNA or RNA. The
CC present sequence represents a human contig polypeptide sequence, which is
CC used in an example from the present invention.
XX
SQ Sequence 708 AA;

Query Match 100.0%; Score 114; DB 7; Length 708;
Best Local Similarity 100.0%; Pred. No. 5.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 148 PRCGNPDVANYNFFPRKPK 166

RESULT 53
AEA20970
ID AEA20970 standard; protein; 708 AA.
XX
AC AEA20970;
XX
DT 11-AUG-2005 (first entry)
XX
DE Novel human polypeptide SEQ ID NO 1664.
XX
KW vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW DNA purification; protein purification; osteoarthritis; antiarthritic;
KW osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;
KW periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW cerebrovascular ischemia; cerebroprotective; vasotropic;
KW cardiovascular disease; autoimmune disease; immunosuppressive;
KW immune disorder; viral infection; virucide; infection; cancer;
KW cytostatic; neoplasm.
XX
OS Homo sapiens.
XX
PN WO2005049806-A2.
XX
PD 02-JUN-2005.
XX
PF 11-MAR-2004; 2004WO-US007412.
XX
PR 14-MAR-2003; 2003US-00389559.
XX

PA (NUVE-) NUVELO INC.
XX
PI Tang TY, Wang J, Wang ZW, Zhang J, Ren F, Zhou P, Ma Y;
PI Ghosh M, Xue A, Asundi V, Zhao Q, Wang D, Goodrich R, Chen R;
PI Wehrman T, Weng G, Boyle B;
XX
DR WPI; 2005-417730/42.
XX
PT New polynucleotide encoding a polypeptide with biological activity,
PT useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT CNS and peripheral disease, stroke, autoimmune disorders, viral
PT infection, or cancer.
XX
PS Example 3; SEQ ID NO 1664; 500pp; English.
XX
CC The invention describes a new isolated polynucleotide (I) encoding a
CC polypeptide with biological activity comprising: a nucleotide sequence of
CC SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC to the sequence of (i) under stringent hybridization conditions; or a
CC nucleotide sequence having greater than 99% sequence identity with the
CC sequence of (i). Also described are: a(n) (expression)vector comprising
CC (I); a host cell genetically engineered to comprise (I) operatively,
CC associated with a regulatory sequence that modulates expression of the
CC polynucleotide in the host cell; an isolated polypeptide comprising a
CC sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC polynucleotide hybridizing under stringent conditions with any one of SEQ
CC ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC carrier; an antibody directed against the polypeptide of (3); a method
CC for detecting (I) in a sample; a method for detecting the polypeptide of
CC (3) in a sample; a method for identifying a compound that binds to the
CC polypeptide of (3); a method of producing the polypeptide of (3); and a
CC collection of polynucleotides, where the collection comprising of at
CC least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC 568-1134. All sequences are fully defined in the specification. The
CC sequences and methods are useful in diagnostics, forensic, and gene
CC mapping, in identifying of mutations responsible for genetic disorders or
CC other traits, in assessing biodiversity, and for producing many other
CC types of data and products dependent on DNA and amino acid sequences. The
CC composition and method are useful for treating a disease or disorder,
CC e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC autoimmune disorders, viral infection, or cancer. This is the amino acid
CC sequence of a novel polypeptide of the invention.
XX
SQ Sequence 708 AA;

Query Match 100.0%; Score 114; DB 9; Length 708;
Best Local Similarity 100.0%; Pred. No. 5.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 148 PRCGNPDVANYNFFPRKPK 166

RESULT 54
ABG23999
ID ABG23999 standard; protein; 1330 AA.
XX
AC ABG23999;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #23990.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US008631.
XX
PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR N-PSDB; AAS88186.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
PS Claim 20; SEQ ID NO 54358; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC amino acid sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 1330 AA;

Query Match 100.0%; Score 114; DB 4; Length 1330;
Best Local Similarity 100.0%; Pred. No. 1.1e-08;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 318 PRCGNPDVANYNFFPRKPK 336

Search completed: February 21, 2006, 18:13:21
Job time : 195.333 secs

APP

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:00:29 ; Search time 43.5 Seconds
(without alignments)
36.111 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	19	2	US-10-153-185-11	Sequence 11, Appl
2	114	100.0	43	2	US-10-153-185-15	Sequence 15, Appl
3	114	100.0	44	2	US-10-153-185-2	Sequence 2, Appli
4	114	100.0	631	2	US-08-448-489-17	Sequence 17, Appl
5	114	100.0	631	2	US-09-689-730-17	Sequence 17, Appl
6	114	100.0	660	2	US-08-704-711A-18	Sequence 18, Appl
7	114	100.0	660	2	US-09-521-220-18	Sequence 18, Appl
8	114	100.0	660	2	US-09-391-104-19	Sequence 19, Appl
9	114	100.0	660	2	US-09-917-254-89	Sequence 89, Appl
10	114	100.0	660	2	US-09-949-016-6512	Sequence 6512, Ap
11	114	100.0	660	2	US-09-949-016-7937	Sequence 7937, Ap
12	114	100.0	660	2	US-10-153-185-14	Sequence 14, Appl
13	114	100.0	663	2	US-09-194-468A-30	Sequence 30, Appl
14	91	79.8	136	2	US-09-513-999C-4639	Sequence 4639, Ap
15	78	68.4	135	2	US-09-513-999C-4163	Sequence 4163, Ap
16	78	68.4	264	2	US-09-009-156-6	Sequence 6, Appli
17	78	68.4	264	2	US-09-372-154-6	Sequence 6, Appli
18	78	68.4	264	2	US-09-950-688-6	Sequence 6, Appli
19	78	68.4	267	2	US-08-448-489-18	Sequence 18, Appl
20	78	68.4	267	2	US-09-391-104-27	Sequence 27, Appl
21	78	68.4	267	2	US-09-689-730-18	Sequence 18, Appl
22	78	68.4	271	2	US-08-896-062-2	Sequence 2, Appli
23	78	68.4	277	2	US-09-949-016-8131	Sequence 8131, Ap
24	72	63.2	50	2	US-10-153-185-3	Sequence 3, Appli
25	72	63.2	471	2	US-09-391-104-25	Sequence 25, Appl
26	72	63.2	480	2	US-09-949-016-10560	Sequence 10560, A
27	68	59.6	56	2	US-10-153-185-4	Sequence 4, Appli
28	66	57.9	55	2	US-10-153-185-6	Sequence 6, Appli
29	66	57.9	471	2	US-08-994-689C-21	Sequence 21, Appl
30	66	57.9	476	2	US-08-704-711A-21	Sequence 21, Appl
31	66	57.9	476	2	US-08-448-489-14	Sequence 14, Appl
32	66	57.9	476	2	US-09-521-220-21	Sequence 21, Appl
33	66	57.9	476	2	US-09-391-104-22	Sequence 22, Appl
34	66	57.9	476	2	US-09-949-016-6224	Sequence 6224, Ap
35	66	57.9	476	2	US-09-689-730-14	Sequence 14, Appl
36	66	57.9	484	2	US-09-949-016-10877	Sequence 10877, A
37	63	55.3	54	2	US-10-153-185-5	Sequence 5, Appli
38	63	55.3	471	2	US-08-994-689C-1	Sequence 1, Appli
39	63	55.3	477	2	US-08-704-711A-20	Sequence 20, Appl
40	63	55.3	477	2	US-08-448-489-15	Sequence 15, Appl
41	63	55.3	477	2	US-08-281-313-1	Sequence 9, Appli
42	63	55.3	477	2	US-09-521-220-20	Sequence 20, Appl
43	63	55.3	477	2	US-09-391-104-21	Sequence 21, Appl
44	63	55.3	477	2	US-09-689-730-15	Sequence 15, Appl
45	63	55.3	477	2	US-09-949-002-342	Sequence 342, App

ALIGNMENTS

RESULT 1
US-10-153-185-11
; Sequence 11, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-11

Query Match 100.0%; Score 114; DB 2; Length 19;
Best Local Similarity 100.0%; Pred. No. 1.4e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 1 PRCGNPDVANYNFFPRKPK 19

RESULT 2
US-10-153-185-15
; Sequence 15, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15

```
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-15

  Query Match             100.0%;  Score 114;  DB 2;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-11;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 3
US-10-153-185-2
; Sequence 2, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match             100.0%;  Score 114;  DB 2;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-11;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 4
US-08-448-489-17
; Sequence 17, Application US/08448489
; Patent No. 6184022
; GENERAL INFORMATION:
;  APPLICANT: SEIKI, Motoharu
;  APPLICANT: SATO, Hiroshi
;  APPLICANT: SHINAGAWA, Akira
;  TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
;  FILE REFERENCE: 55-290P
;  CURRENT APPLICATION NUMBER: US/08/448,489
;  CURRENT FILING DATE: 1995-06-07
;  NUMBER OF SEQ ID NOS: 19
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
;   LENGTH: 631
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Known Member of
;   OTHER INFORMATION: Matrix Metalloproteinase Family
US-08-448-489-17

  Query Match             100.0%;  Score 114;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 7.3e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 5
US-09-689-730-17
; Sequence 17, Application US/09689730
; Patent No. 6825024
; GENERAL INFORMATION:
;  APPLICANT: SEIKI, Motoharu
;  APPLICANT:  SATO, Hiroshi
;  APPLICANT:  SHINAGAWA, Akira
;  TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
;  FILE REFERENCE: 55-290P
;  CURRENT APPLICATION NUMBER: US/09/689,730
;  CURRENT FILING DATE:  2000-10-13
;  PRIOR APPLICATION NUMBER: US/08/448,489
;  PRIOR FILING DATE: 1995-06-07
;  NUMBER OF SEQ ID NOS: 19
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
;   LENGTH: 631
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Known Member of
;   OTHER INFORMATION: Matrix Metalloproteinase Family
US-09-689-730-17

  Query Match             100.0%;  Score 114;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 7.3e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         71 PRCGNPDVANYNFFPRKPK 89


RESULT 6
US-08-704-711A-18
; Sequence 18, Application US/08704711A
; Patent No. 6114159
;  GENERAL INFORMATION:
;    APPLICANT:  WILL, Horst
;    APPLICANT:  HINZMANN, Bernd
;    TITLE OF INVENTION:  DNA SEQUENCES FOR MATRIX
;    TITLE OF INVENTION:  METALLOPROTEASES, THEIR PRODUCTION AND USE
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Foley & Lardner
;      STREET:  3000 K Street, N.W., Suite 500
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20007-5109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/704,711A
;      FILING DATE:  20-NOV-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/DE95/00357
;      FILING DATE:  17-MAR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  DE 4438838.1
;      FILING DATE:  21-OCT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  DE 4409663.1
```

```
;       FILING DATE:  17-MAR-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  GRANADOS, Patricia D.
;       REGISTRATION NUMBER:  33,683
;       REFERENCE/DOCKET NUMBER:  26083/124
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (202)672-5300
;       TELEFAX:  (202)672-5399
;       TELEX:  904136
;   INFORMATION FOR SEQ ID NO:  18:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  660 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-704-711A-18

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 7
US-09-521-220-18
; Sequence 18, Application US/09521220
; Patent No. 6399348
;   GENERAL INFORMATION:
;        APPLICANT: WILL, Horst
;                   HINZMANN, Bernd
;        TITLE OF INVENTION: DNA SEQUENCES FOR MATRIX
;                            METALLOPROTEASES, THEIR PRODUCTION AND USE
;        NUMBER OF SEQUENCES: 22
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Foley & Lardner
;             STREET: 3000 K Street, N.W., Suite 500
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20007-5109
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/521,220
;             FILING DATE: 08-Mar-2000
;             CLASSIFICATION: <Unknown>
;                             21-OCT-1994
;                             17-MAR-1994
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/704,711
;             FILING DATE: <Unknown>
;             APPLICATION NUMBER: DE 4438838.1
;             FILING DATE: 21-OCT-1994
;             APPLICATION NUMBER: DE 4409663.1
;             FILING DATE: 17-MAR-1994
;        ATTORNEY/AGENT INFORMATION:
;             NAME: GRANADOS, Patricia D.
;             REGISTRATION NUMBER: 33,683
;             REFERENCE/DOCKET NUMBER: 26083/124
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (202)672-5300
;             TELEFAX: (202)672-5399
;             TELEX: 904136
;   INFORMATION FOR SEQ ID NO: 18:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 660 amino acids
;             TYPE: amino acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-521-220-18

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 8
US-09-391-104-19
; Sequence 19, Application US/09391104
; Patent No. 6399371
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 9
US-09-917-254-89
; Sequence 89, Application US/09917254
; Patent No. 6703204
; GENERAL INFORMATION:
;  APPLICANT: Mutter, George
;  APPLICANT:  Baak, Jan
;  TITLE OF INVENTION: Prognostic Classification of Breast Cancer
;  FILE REFERENCE: B0801/7224(JRV)
;  CURRENT APPLICATION NUMBER: US/09/917,254
;  CURRENT FILING DATE:  2001-07-27
;  PRIOR APPLICATION NUMBER: US 60/222,093
;  PRIOR FILING DATE: 2000-07-28
;  NUMBER OF SEQ ID NOS: 102
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 89
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-09-917-254-89

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 10
US-09-949-016-6512
; Sequence 6512, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6512
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-6512

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 11
US-09-949-016-7937
; Sequence 7937, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7937
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-7937

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 12
US-10-153-185-14
; Sequence 14, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match             100.0%;  Score 114;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 7.6e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 13
US-09-194-468A-30
; Sequence 30, Application US/09194468A
; Patent No. 6500924
; GENERAL INFORMATION:
;  APPLICANT:  Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION:  METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
;  FILE REFERENCE:  MER0049S
;  CURRENT APPLICATION NUMBER: US/09/194,468A
;  CURRENT FILING DATE:  1999-03-23
;  PRIOR APPLICATION NUMBER:  60/018,773
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  60/015,896
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  PCT/US97/09158
;  PRIOR FILING DATE:  1997-05-30
;  NUMBER OF SEQ ID NOS:  45
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-09-194-468A-30

  Query Match             100.0%;  Score 114;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 7.7e-10;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 14
US-09-513-999C-4639
; Sequence 4639, Application US/09513999C
; Patent No. 6783961
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
```

```
;  APPLICANT:  Duclert, A.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
; Patent No. 6783961
;  FILE REFERENCE: 59.US2.REG
;  CURRENT APPLICATION NUMBER: US/09/513,999C
;  CURRENT FILING DATE:  2000-02-24
;  PRIOR APPLICATION NUMBER: US 60/122,487
;  PRIOR FILING DATE: 1999-02-26
;  NUMBER OF SEQ ID NOS: 36681
;  SOFTWARE: Patent.pm
; SEQ ID NO 4639
;   LENGTH: 136
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -29..-1
;   OTHER INFORMATION: score 11.4
;   OTHER INFORMATION: seq LCLLGCLLSHAAA/AP
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 16
;   OTHER INFORMATION: Xaa=Lys or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 17
;   OTHER INFORMATION: Xaa=Asp or Val
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 19
;   OTHER INFORMATION: Xaa=Glu or Lys
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 22
;   OTHER INFORMATION: Xaa=Leu or Val
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 26
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 27
;   OTHER INFORMATION: Xaa=Ile or Asn or Ser or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 33
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 34
;   OTHER INFORMATION: Xaa=Glu or Lys
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 66
;   OTHER INFORMATION: Xaa=Asp or Glu
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 67
;   OTHER INFORMATION: Xaa=Ala or Pro or Ser or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 75
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 80
;   OTHER INFORMATION: Xaa=Lys or Asn or Arg or Ser
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 88
;   OTHER INFORMATION: Xaa=Ala or Cys or Asp or Phe or Gly or His or Ile or Leu or Asn o
;   OTHER INFORMATION: Tyr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 104
;   OTHER INFORMATION: Xaa=Ala or Pro
US-09-513-999C-4639

  Query Match             79.8%;  Score 91;  DB 2;  Length 136;
  Best Local Similarity   84.2%;  Pred. No. 6e-07;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| ||||||| |
Db        100 PRCGXPDVAXYNFFPRKXK 118


RESULT 15
US-09-513-999C-4163
; Sequence 4163, Application US/09513999C
; Patent No. 6783961
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Duclert, A.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
; Patent No. 6783961
;  FILE REFERENCE: 59.US2.REG
;  CURRENT APPLICATION NUMBER: US/09/513,999C
;  CURRENT FILING DATE:  2000-02-24
;  PRIOR APPLICATION NUMBER: US 60/122,487
;  PRIOR FILING DATE: 1999-02-26
;  NUMBER OF SEQ ID NOS: 36681
;  SOFTWARE: Patent.pm
; SEQ ID NO 4163
;   LENGTH: 135
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -17..-1
;   OTHER INFORMATION: score 13
;   OTHER INFORMATION: seq VLCAVCLLPGSLA/LP
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 60
;   OTHER INFORMATION: Xaa=His or Arg
US-09-513-999C-4163

  Query Match             68.4%;  Score 78;  DB 2;  Length 135;
  Best Local Similarity   68.4%;  Pred. No. 7.1e-05;
  Matches   13;  Conservative    1;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| |: ||  ||
Db         85 PRCGVPDVAEYSLFPNSPK 103


Search completed: February 21, 2006, 08:02:40
Job time : 43.5 secs
```

This Page Blank (uspto)

APP
Ø Meth

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:13:46 ; Search time 146 Seconds
(without alignments)
54.375 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 48

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : Published_Applications_AA_Main:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	19	4	US-10-219-329-11	Sequence 11, Appl
2	114	100.0	19	4	US-10-153-185-11	Sequence 11, Appl
3	114	100.0	19	4	US-10-219-561-11	Sequence 11, Appl
4	114	100.0	19	4	US-10-032-376A-11	Sequence 11, Appl
5	114	100.0	19	4	US-10-335-207-11	Sequence 11, Appl
6	114	100.0	19	5	US-10-601-059-11	Sequence 11, Appl
7	114	100.0	19	6	US-11-031-488-11	Sequence 11, Appl
8	114	100.0	43	4	US-10-219-329-15	Sequence 15, Appl
9	114	100.0	43	4	US-10-153-185-15	Sequence 15, Appl
10	114	100.0	43	4	US-10-219-561-15	Sequence 15, Appl
11	114	100.0	43	4	US-10-032-376A-15	Sequence 15, Appl
12	114	100.0	43	4	US-10-335-207-15	Sequence 15, Appl
13	114	100.0	43	5	US-10-601-059-15	Sequence 15, Appl
14	114	100.0	43	6	US-11-031-488-15	Sequence 15, Appl
15	114	100.0	44	4	US-10-219-329-2	Sequence 2, Appli
16	114	100.0	44	4	US-10-153-185-2	Sequence 2, Appli
17	114	100.0	44	4	US-10-219-561-2	Sequence 2, Appli
18	114	100.0	44	4	US-10-032-376A-2	Sequence 2, Appli
19	114	100.0	44	4	US-10-335-207-2	Sequence 2, Appli
20	114	100.0	44	5	US-10-601-059-2	Sequence 2, Appli
21	114	100.0	44	6	US-11-031-488-2	Sequence 2, Appli
22	114	100.0	75	3	US-09-864-761-37964	Sequence 37964, A
23	114	100.0	462	5	US-10-852-707-56	Sequence 56, Appl
24	114	100.0	468	5	US-10-450-763-54360	Sequence 54360, A
25	114	100.0	660	3	US-09-391-104-19	Sequence 19, Appl
26	114	100.0	660	3	US-09-801-196-35	Sequence 35, Appl
27	114	100.0	660	3	US-09-918-715-208	Sequence 208, App
28	114	100.0	660	4	US-10-219-329-14	Sequence 14, Appl
29	114	100.0	660	4	US-10-301-822-125	Sequence 125, App
30	114	100.0	660	4	US-10-153-185-14	Sequence 14, Appl
31	114	100.0	660	4	US-10-219-561-14	Sequence 14, Appl
32	114	100.0	660	4	US-10-131-985-25	Sequence 25, Appl
33	114	100.0	660	4	US-10-447-315-3	Sequence 3, Appli
34	114	100.0	660	4	US-10-032-376A-14	Sequence 14, Appl
35	114	100.0	660	4	US-10-335-207-14	Sequence 14, Appl
36	114	100.0	660	4	US-10-480-621-1	Sequence 1, Appli
37	114	100.0	660	4	US-10-474-794-208	Sequence 208, App
38	114	100.0	660	5	US-10-601-059-14	Sequence 14, Appl
39	114	100.0	660	5	US-10-872-198-131	Sequence 131, App
40	114	100.0	660	5	US-10-901-417-25	Sequence 25, Appl
41	114	100.0	660	5	US-10-979-159-208	Sequence 208, App
42	114	100.0	660	5	US-10-287-436A-489	Sequence 489, App
43	114	100.0	660	5	US-10-287-436A-1185	Sequence 1185, Ap
44	114	100.0	660	6	US-11-021-951-131	Sequence 131, App
45	114	100.0	660	6	US-11-031-488-14	Sequence 14, Appl
46	114	100.0	663	4	US-10-115-223-30	Sequence 30, Appl
47	114	100.0	663	4	US-10-402-212-30	Sequence 30, Appl
48	114	100.0	1330	5	US-10-450-763-54358	Sequence 54358, A

ALIGNMENTS

RESULT 1
US-10-219-329-11
; Sequence 11, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Weart, Ilona f.
; TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
; FILE REFERENCE: 1443.035WO1
; CURRENT APPLICATION NUMBER: US/10/219,329
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-329-11

Query Match 100.0%; Score 114; DB 4; Length 19;
Best Local Similarity 100.0%; Pred. No. 1.5e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 1 PRCGNPDVANYNFFPRKPK 19

RESULT 2
US-10-153-185-11
; Sequence 11, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16

```
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-11

  Query Match             100.0%;  Score 114;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 3
US-10-219-561-11
; Sequence 11, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-11

  Query Match             100.0%;  Score 114;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 4
US-10-032-376A-11
; Sequence 11, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-11

  Query Match             100.0%;  Score 114;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 5
US-10-335-207-11
; Sequence 11, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-11

  Query Match             100.0%;  Score 114;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 6
US-10-601-059-11
; Sequence 11, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-11

  Query Match             100.0%;  Score 114;  DB 5;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
```

```
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 7
US-11-031-488-11
; Sequence 11, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-11

  Query Match             100.0%;  Score 114;  DB 6;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db          1 PRCGNPDVANYNFFPRKPK 19


RESULT 8
US-10-219-329-15
; Sequence 15, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-15

  Query Match             100.0%;  Score 114;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 9
US-10-153-185-15
; Sequence 15, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-15

  Query Match             100.0%;  Score 114;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 10
US-10-219-561-15
; Sequence 15, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-15

  Query Match             100.0%;  Score 114;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 11
US-10-032-376A-15
; Sequence 15, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
```

```
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-15

  Query Match             100.0%;  Score 114;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 12
US-10-335-207-15
; Sequence 15, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-15

  Query Match             100.0%;  Score 114;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 13
US-10-601-059-15
; Sequence 15, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-15

  Query Match             100.0%;  Score 114;  DB 5;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 14
US-11-031-488-15
; Sequence 15, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-15

  Query Match             100.0%;  Score 114;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 15
US-10-219-329-2
; Sequence 2, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-2
```

```
  Query Match           100.0%;  Score 114;  DB 4;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 16
US-10-153-185-2
; Sequence 2, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match           100.0%;  Score 114;  DB 4;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 17
US-10-219-561-2
; Sequence 2, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-2

  Query Match           100.0%;  Score 114;  DB 4;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 18
US-10-032-376A-2
; Sequence 2, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-2

  Query Match           100.0%;  Score 114;  DB 4;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 19
US-10-335-207-2
; Sequence 2, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-2

  Query Match           100.0%;  Score 114;  DB 4;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 20
US-10-601-059-2
; Sequence 2, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
```

```
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-2

  Query Match             100.0%;  Score 114;  DB 5;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 21
US-11-031-488-2
; Sequence 2, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-2

  Query Match             100.0%;  Score 114;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 3.4e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         24 PRCGNPDVANYNFFPRKPK 42


RESULT 22
US-09-864-761-37964
; Sequence 37964, Application US/09864761
; Patent No. US20020048763A1
; GENERAL INFORMATION:
;  APPLICANT: Penn, Sharron G.
;  APPLICANT:  Rank, David R.
;  APPLICANT:  Hanzel, David K.
;  APPLICANT:  Chen, Wensheng
;  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
;  TITLE OF INVENTION:  GENE EXPRESSION ANALYSIS BY MICROARRAY
;  FILE REFERENCE: Aeomica-X-1
;  CURRENT APPLICATION NUMBER: US/09/864,761
;  CURRENT FILING DATE:  2001-05-23
;  PRIOR APPLICATION NUMBER: US 60/180,312
;  PRIOR FILING DATE: 2000-02-04
;  PRIOR APPLICATION NUMBER: US 60/207,456
;  PRIOR FILING DATE: 2000-05-26
;  PRIOR APPLICATION NUMBER: US 09/632,366
;  PRIOR FILING DATE: 2000-08-03
;  PRIOR APPLICATION NUMBER: GB 24263.6
;  PRIOR FILING DATE: 2000-10-04
;  PRIOR APPLICATION NUMBER: US 60/236,359
;  PRIOR FILING DATE: 2000-09-27
;  PRIOR APPLICATION NUMBER: PCT/US01/00666
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00667
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00664
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00669
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00665
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00668
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00663
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00662
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00661
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00670
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: US 60/234,687
;  PRIOR FILING DATE: 2000-09-21
;  PRIOR APPLICATION NUMBER: US 09/608,408
;  PRIOR FILING DATE: 2000-06-30
;  PRIOR APPLICATION NUMBER: US 09/774,203
;  PRIOR FILING DATE: 2001-01-29
;  NUMBER OF SEQ ID NOS: 49117
;  SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 37964
;   LENGTH: 75
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: MAP TO AC007336.2
;   OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1.1
;   OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5
;   OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL =   2
;   OTHER INFORMATION: EST_HUMAN HIT: AI752577.1, EVALUE 1.00e-41
;   OTHER INFORMATION: SWISSPROT HIT: P33436, EVALUE 1.00e-42
US-09-864-761-37964

  Query Match             100.0%;  Score 114;  DB 3;  Length 75;
  Best Local Similarity   100.0%;  Pred. No. 5.7e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         49 PRCGNPDVANYNFFPRKPK 67


RESULT 23
US-10-852-707-56
; Sequence 56, Application US/10852707
; Publication No. US20050142572A1
; GENERAL INFORMATION:
;  APPLICANT: Macina, Roberto
;  APPLICANT:  Turner, Leah
;  APPLICANT:  Sun, Yongming
;  TITLE OF INVENTION: Compositions, Splice Variants and Methods Relating to Lung Specif
;  TITLE OF INVENTION:  Nucleic Acids and Proteins
```

```
;  FILE REFERENCE: DEX-0486
;  CURRENT APPLICATION NUMBER: US/10/852,707
;  CURRENT FILING DATE:  2004-05-24
;  PRIOR APPLICATION NUMBER: US 60/473,941
;  PRIOR FILING DATE: 2003-05-22
;  NUMBER OF SEQ ID NOS: 138
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 56
;   LENGTH: 462
;   TYPE: PRT
;   ORGANISM: Homo sapien
US-10-852-707-56

  Query Match           100.0%;  Score 114;  DB 5;  Length 462;
  Best Local Similarity  100.0%;  Pred. No. 3.5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 24
US-10-450-763-54360
; Sequence 54360, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54360
;   LENGTH: 468
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (221)..(258)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (167)..(264)
;   OTHER INFORMATION: Fibronectin type II domain identified by PFam, accession name
;   OTHER INFORMATION: fn2, E-value=4.4e-55, PFam score of 147.1
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)...(468)
;   OTHER INFORMATION: Xaa = X or * as defined in Table 2
US-10-450-763-54360

  Query Match           100.0%;  Score 114;  DB 5;  Length 468;
  Best Local Similarity  100.0%;  Pred. No. 3.5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         86 PRCGNPDVANYNFFPRKPK 104


RESULT 25
US-09-391-104-19
; Sequence 19, Application US/09391104
; Publication No. US20020031817A1
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match           100.0%;  Score 114;  DB 3;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 26
US-09-801-196-35
; Sequence 35, Application US/09801196
; Patent No. US20020037827A1
; GENERAL INFORMATION:
;  APPLICANT:  Wang, Kai
;  APPLICANT:  Smith, Ryan
;  APPLICANT:  Fajardo, Mark
;  APPLICANT:  Moss, Patrick
;  TITLE OF INVENTION:  A NOVEL MATRIX METALLOPROTEINASE (MMP-25)
;  TITLE OF INVENTION:  EXPRESSED IN SKIN CELLS
;  FILE REFERENCE:  240083.509
;  CURRENT APPLICATION NUMBER: US/09/801,196
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  37
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 35
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-801-196-35

  Query Match           100.0%;  Score 114;  DB 3;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 27
US-09-918-715-208
; Sequence 208, Application US/09918715
; Publication No. US20030017157A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/09/918,715
```

```
;  CURRENT FILING DATE:  2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-918-715-208

  Query Match             100.0%;  Score 114;  DB 3;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 28
US-10-219-329-14
; Sequence 14, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-14

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 29
US-10-301-822-125
; Sequence 125, Application US/10301822
; Publication No. US20030148410A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/10/301,822
;  CURRENT FILING DATE:  2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-10-301-822-125

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 30
US-10-153-185-14
; Sequence 14, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 31
US-10-219-561-14
; Sequence 14, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
```

```
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-14

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 32
US-10-131-985-25
; Sequence 25, Application US/10131985
; Publication No. US20030199440A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/131,985
;  CURRENT FILING DATE:  2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-131-985-25

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 33
US-10-447-315-3
; Sequence 3, Application US/10447315
; Publication No. US20040071687A1
; GENERAL INFORMATION:
;  APPLICANT: Rafii, Shahin
;  APPLICANT:  Heissig, Beate
;  APPLICANT:  Hattori, Koichi
;  APPLICANT:  Cornell Research Foundation, Inc.
;  TITLE OF INVENTION: Adult Stem Cell Recruitment
;  FILE REFERENCE: 1676.006US1
;  CURRENT APPLICATION NUMBER: US/10/447,315
;  CURRENT FILING DATE:  2003-05-28
;  PRIOR APPLICATION NUMBER: US 60/383,658
;  PRIOR FILING DATE: 2002-05-28
;  NUMBER OF SEQ ID NOS: 28
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-447-315-3

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 34
US-10-032-376A-14
; Sequence 14, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-14

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 35
US-10-335-207-14
; Sequence 14, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-14

  Query Match             100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 36
US-10-480-621-1
```

```
; Sequence 1, Application US/10480621
; Publication No. US20040175817A1
; GENERAL INFORMATION:
;  APPLICANT: Jepson, Holly
;  APPLICANT:  Minshull, Claire
;  APPLICANT:  Pauptit, Richard
;  APPLICANT:  Rowsell, Sian
;  TITLE OF INVENTION: A CRYSTALLISED CATALYTIC DOMAIN OF MATRIX
;  TITLE OF INVENTION:  METALLOPROTEINASE 9 (MMP9) AND THE USE OF
;  TITLE OF INVENTION:  ITS THREE DIMENSIONAL STRUCTURE TO DESIGN
;  TITLE OF INVENTION:  MMP9 MODULATORS
;  FILE REFERENCE: 06275-377US1
;  CURRENT APPLICATION NUMBER: US/10/480,621
;  CURRENT FILING DATE:  2003-12-12
;  PRIOR APPLICATION NUMBER: PCT/SE02/01266
;  PRIOR FILING DATE: 2002-06-24
;  PRIOR APPLICATION NUMBER: SE 0102298-7
;  PRIOR FILING DATE: 2001-06-27
;  NUMBER OF SEQ ID NOS: 2
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-480-621-1

  Query Match           100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 37
US-10-474-794-208
; Sequence 208, Application US/10474794
; Publication No. US20040213793A1
; GENERAL INFORMATION:
;  APPLICANT: Carson-Walter, Eleanor
;  APPLICANT:  St. Croix, Brad
;  APPLICANT:  Vogelstein, Bert
;  APPLICANT:  Kinzler, Kenneth
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00179
;  CURRENT APPLICATION NUMBER: US/10/474,794
;  CURRENT FILING DATE:  2003-10-14
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2001-04-11
;  PRIOR APPLICATION NUMBER: 60/308,829
;  PRIOR FILING DATE: 2001-08-01
;  NUMBER OF SEQ ID NOS: 359
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-474-794-208

  Query Match           100.0%;  Score 114;  DB 4;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 38
US-10-601-059-14
; Sequence 14, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-14

  Query Match           100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 39
US-10-872-198-131
; Sequence 131, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
;  APPLICANT: Ulrich HAUPTS
;  APPLICANT:  Andre KOLTERMANN
;  APPLICANT:  Andreas SCHEIDIG
;  APPLICANT:  Christian VOETSMEIER
;  APPLICANT:  Ulrich Kettling
;  TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
;  FILE REFERENCE: 04156.0002U4
;  CURRENT APPLICATION NUMBER: US/10/872,198
;  CURRENT FILING DATE:  2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 149
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-872-198-131

  Query Match           100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 5e-08;
```

```
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 40
US-10-901-417-25
; Sequence 25, Application US/10901417
; Publication No. US20050026836A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/901,417
;  CURRENT FILING DATE:  2004-07-28
;  PRIOR APPLICATION NUMBER: US/10/131,985
;  PRIOR FILING DATE: 2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-901-417-25

  Query Match             100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 41
US-10-979-159-208
; Sequence 208, Application US/10979159
; Publication No. US20050142138A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/10/979,159
;  CURRENT FILING DATE:  2004-11-03
;  PRIOR APPLICATION NUMBER: US/09/918,715
;  PRIOR FILING DATE: 2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-979-159-208

  Query Match             100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 42
US-10-287-436A-489
; Sequence 489, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 489
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-489

  Query Match             100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 43
US-10-287-436A-1185
; Sequence 1185, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1185
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-1185

  Query Match             100.0%;  Score 114;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 44
US-11-021-951-131
; Sequence 131, Application US/11021951
; Publication No. US20050175581A1
```

```
; GENERAL INFORMATION:
;  APPLICANT: HAUPTS, Ulrich
;  APPLICANT:  KOLTERMANN, Andre
;  APPLICANT:  SCHEIDIG, Andreas
;  APPLICANT:  VOTSMEIER, Christian
;  APPLICANT:  Kettling, Ulrich
;  APPLICANT:  COCO, Wayne Michael
;  TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
;  TITLE OF INVENTION:  And Diagnostic Use Thereof
;  FILE REFERENCE: 04156.0002US
;  CURRENT APPLICATION NUMBER: US/11/021,951
;  CURRENT FILING DATE:  2004-12-22
;  PRIOR APPLICATION NUMBER: 10/872,198
;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 191
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-021-951-131

  Query Match            100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 45
US-11-031-488-14
; Sequence 14, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-14

  Query Match            100.0%;  Score 114;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        100 PRCGNPDVANYNFFPRKPK 118


RESULT 46
US-10-115-223-30
; Sequence 30, Application US/10115223
; Publication No. US20030176334A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
;  FILE REFERENCE: MER0049S
;  CURRENT APPLICATION NUMBER: US/10/115,223
;  CURRENT FILING DATE:  2002-04-02
;  PRIOR APPLICATION NUMBER: US/09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,896
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  NUMBER OF SEQ ID NOS: 45
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-115-223-30

  Query Match            100.0%;  Score 114;  DB 4;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 47
US-10-402-212-30
; Sequence 30, Application US/10402212
; Publication No. US20040063790A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter C.
;  APPLICANT:  Cheresh, David A.
;  APPLICANT:  Silletti, Steven A.
;  APPLICANT:  The Scripps Research Institute
;  TITLE OF INVENTION: METHODS FOR INHIBITION OF ANGIOGENESIS
;  FILE REFERENCE: TSRI-419.3
;  CURRENT APPLICATION NUMBER: US/10/402,212
;  CURRENT FILING DATE:  2003-03-28
;  PRIOR APPLICATION NUMBER: 10/115,223
;  PRIOR FILING DATE: 2002-04-02
;  PRIOR APPLICATION NUMBER: 09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,869
;  PRIOR FILING DATE: 1996-05-31
;  NUMBER OF SEQ ID NOS: 47
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-402-212-30

  Query Match            100.0%;  Score 114;  DB 4;  Length 663;
```

```
  Best Local Similarity   100.0%;  Pred. No. 5e-08;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db         97 PRCGNPDVANYNFFPRKPK 115


RESULT 48
US-10-450-763-54358
; Sequence 54358, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54358
;   LENGTH: 1330
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (579)..(616)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (271)..(451)
;   OTHER INFORMATION: Matrixin domain identified by PFam, accession name
;   OTHER INFORMATION: Peptidase_M10, E-value=3.7e-109, PFam score of 376.1
US-10-450-763-54358

  Query Match             100.0%;  Score 114;  DB 5;  Length 1330;
  Best Local Similarity   100.0%;  Pred. No. 1e-07;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||||||||||||||||||
Db        318 PRCGNPDVANYNFFPRKPK 336


Search completed: February 21, 2006, 18:35:35
Job time : 147 secs
```

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:21:13 ; Search time 12.5 Seconds
(without alignments)
21.644 Million cell updates/sec

Title: US-10-601-059-11
Perfect score: 114
Sequence: 1 PRCGNPDVANYNFFPRKPK 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 108093 seqs, 14239677 residues

Total number of hits satisfying chosen parameters: 108093

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	114	100.0	660	7	US-11-186-284-125	Sequence 125, App
2	114	100.0	708	6	US-10-821-234-917	Sequence 917, App
3	82	71.9	483	7	US-11-037-243-79	Sequence 79, Appl
4	78	68.4	267	6	US-10-995-561-542	Sequence 542, App
5	78	68.4	267	7	US-11-186-284-129	Sequence 129, App
6	63	55.3	444	7	US-11-043-788-244	Sequence 244, App
7	63	55.3	477	7	US-11-186-284-127	Sequence 127, App
8	63	55.3	477	7	US-11-043-788-243	Sequence 243, App
9	51	44.7	513	6	US-10-131-826A-192	Sequence 192, App
10	51	44.7	513	6	US-10-995-561-566	Sequence 566, App
11	49	43.0	19	6	US-10-503-575-150	Sequence 150, App
12	49	43.0	469	7	US-11-186-284-119	Sequence 119, App
13	47	41.2	470	7	US-11-186-284-123	Sequence 123, App
14	45	39.5	225	7	US-11-043-788-278	Sequence 278, App
15	45	39.5	276	7	US-11-043-788-277	Sequence 277, App
16	45	39.5	314	7	US-11-010-239-123	Sequence 123, App
17	45	39.5	360	7	US-11-043-788-276	Sequence 276, App
18	45	39.5	707	7	US-11-186-284-132	Sequence 132, App
19	45	39.5	707	7	US-11-044-640-2	Sequence 2, Appli
20	45	39.5	707	7	US-11-043-788-275	Sequence 275, App
21	42	36.8	264	6	US-10-495-597-2	Sequence 2, Appli
22	41.5	36.4	761	7	US-11-057-047-6	Sequence 6, Appli
23	41	36.0	447	6	US-10-467-657-364	Sequence 364, App
24	41	36.0	1254	6	US-10-528-031-47	Sequence 47, Appl
25	40	35.1	296	6	US-10-965-972-8	Sequence 8, Appli
26	40	35.1	509	7	US-11-024-959-393	Sequence 393, App
27	40	35.1	520	7	US-11-024-959-272	Sequence 272, App
28	40	35.1	756	7	US-11-113-837-20	Sequence 20, Appl
29	39.5	34.6	362	7	US-11-233-683-3	Sequence 3, Appli
30	39.5	34.6	377	6	US-10-999-866-37	Sequence 37, Appl
31	39.5	34.6	377	6	US-10-493-909-24	Sequence 24, Appl
32	39.5	34.6	377	7	US-11-061-821-37	Sequence 37, Appl
33	39.5	34.6	377	7	US-11-102-621-113	Sequence 113, App
34	39.5	34.6	377	7	US-11-102-621-115	Sequence 115, App
35	39.5	34.6	377	7	US-11-124-620-3	Sequence 3, Appli
36	39	34.2	35	7	US-11-233-683-50	Sequence 50, Appl
37	39	34.2	35	7	US-11-233-683-55	Sequence 55, Appl
38	39	34.2	215	7	US-11-218-821-6	Sequence 6, Appli
39	39	34.2	269	6	US-10-495-597-3	Sequence 3, Appli
40	39	34.2	295	7	US-11-098-686-11159	Sequence 11159, A
41	39	34.2	326	6	US-10-999-866-36	Sequence 36, Appl
42	39	34.2	326	6	US-10-493-909-22	Sequence 22, Appl
43	39	34.2	326	7	US-11-144-248-28	Sequence 28, Appl
44	39	34.2	326	7	US-11-061-821-36	Sequence 36, Appl
45	39	34.2	326	7	US-11-144-222-28	Sequence 28, Appl

ALIGNMENTS

RESULT 1
US-11-186-284-125
; Sequence 125, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
; APPLICANT: Millennium Pharmaceuticals, Inc.
; APPLICANT: Berger, Allison
; APPLICANT: Guillemette, Tracy L.
; APPLICANT: Kamatkar, Shubhangi
; APPLICANT: Schlegel, Robert
; APPLICANT: Monahan, John E.
; APPLICANT: Thibodeau, Stephen N.
; APPLICANT: Burgart, Lawrence J.
; TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
; TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
; TITLE OF INVENTION: THERAPY OF COLON CANCER
; FILE REFERENCE: MPM01-029P2RNM
; CURRENT APPLICATION NUMBER: US/11/186,284
; CURRENT FILING DATE: 2005-07-21
; PRIOR APPLICATION NUMBER: US/10/301,822
; PRIOR FILING DATE: 2002-11-21
; PRIOR APPLICATION NUMBER: US 60/339,971
; PRIOR FILING DATE: 2001-12-10
; PRIOR APPLICATION NUMBER: US 60/361,978
; PRIOR FILING DATE: 2002-03-05
; PRIOR APPLICATION NUMBER: US 60/381,988
; PRIOR FILING DATE: 2002-05-20
; NUMBER OF SEQ ID NOS: 228
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
; LENGTH: 660
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-11-186-284-125

Query Match 100.0%; Score 114; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 1e-09;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVANYNFFPRKPK 19
||||||||||||||||||||
Db 100 PRCGNPDVANYNFFPRKPK 118

RESULT 2
US-10-821-234-917
; Sequence 917, Application US/10821234
; Publication No. US20050255114A1

```
; GENERAL INFORMATION:
;  APPLICANT: Labat, Ivan
;  APPLICANT:  Stache-Crain, Birgit
;  APPLICANT:  Andarmani, Susan
;  APPLICANT:  Tang, Y. Tom
;  TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
;  FILE REFERENCE: 821A
;  CURRENT APPLICATION NUMBER: US/10/821,234
;  CURRENT FILING DATE:  2004-04-07
;  PRIOR APPLICATION NUMBER: US 60/462,047
;  PRIOR FILING DATE: 2003-04-07
;  NUMBER OF SEQ ID NOS: 1704
;  SOFTWARE: pt_SEQ_genes Version 1.0
; SEQ ID NO 917
;   LENGTH: 708
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-821-234-917

  Query Match            100.0%;  Score 114;  DB 6;  Length 708;
  Best Local Similarity  100.0%;  Pred. No. 1.1e-09;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              ||||||||||||||||||||
Db        148 PRCGNPDVANYNFFPRKPK 166


RESULT 3
US-11-037-243-79
; Sequence 79, Application US/11037243
; Publication No. US20050287546A1
; GENERAL INFORMATION:
;  APPLICANT: PLOWMAN, GREGORY
;  APPLICANT:  WHYTE, DAVID
;  APPLICANT:  CAENEPEEL, SEAN
;  APPLICANT:  CHARYDCZAK, GLEN
;  APPLICANT:  MANNING, GERARD
;  APPLICANT:  SUDARSANAM, SUCHA
;  TITLE OF INVENTION: NOVEL PROTEASES
;  FILE REFERENCE: 038602/1214
;  CURRENT APPLICATION NUMBER: US/11/037,243
;  CURRENT FILING DATE:  2005-05-26
;  PRIOR APPLICATION NUMBER: US/09/888,615
;  PRIOR FILING DATE: 2001-06-26
;  PRIOR APPLICATION NUMBER: 60/214,047
;  PRIOR FILING DATE: 2000-06-26
;  NUMBER OF SEQ ID NOS: 150
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 79
;   LENGTH: 483
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-037-243-79

  Query Match            71.9%;  Score 82;  DB 7;  Length 483;
  Best Local Similarity  73.7%;  Pred. No. 4.4e-05;
  Matches   14;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| ||||||  || :||
Db         98 PRCGVPDVANYRLFPGEPK 116


RESULT 4
US-10-995-561-542
; Sequence 542, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
;  APPLICANT: CARGILL, Michele et al.
;  TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
;  TITLE OF INVENTION:  CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
;  TITLE OF INVENTION:  DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001559
;  CURRENT APPLICATION NUMBER: US/10/995,561
;  CURRENT FILING DATE:  2004-11-24
;  NUMBER OF SEQ ID NOS: 85702
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 542
;   LENGTH: 267
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-995-561-542

  Query Match            68.4%;  Score 78;  DB 6;  Length 267;
  Best Local Similarity  68.4%;  Pred. No. 9.5e-05;
  Matches   13;  Conservative    1;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| |: ||  ||
Db         85 PRCGVPDVAEYSLFPNSPK 103


RESULT 5
US-11-186-284-129
; Sequence 129, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 129
;   LENGTH: 267
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-129

  Query Match            68.4%;  Score 78;  DB 7;  Length 267;
  Best Local Similarity  68.4%;  Pred. No. 9.5e-05;
  Matches   13;  Conservative    1;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| |: ||  ||
Db         85 PRCGVPDVAEYSLFPNSPK 103


RESULT 6
US-11-043-788-244
; Sequence 244, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
```

```
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 244
;   LENGTH: 444
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-244

  Query Match             55.3%;  Score 63;  DB 7;  Length 444;
  Best Local Similarity   57.9%;  Pred. No. 0.027;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| ||| ::  ||  ||
Db         57 PRCGVPDVGHFRTFPGIPK 75


RESULT 7
US-11-186-284-127
; Sequence 127, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 127
;   LENGTH: 477
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-127

  Query Match             55.3%;  Score 63;  DB 7;  Length 477;
  Best Local Similarity   57.9%;  Pred. No. 0.029;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| ||| ::  ||  ||
Db         90 PRCGVPDVGHFRTFPGIPK 108


RESULT 8
US-11-043-788-243
; Sequence 243, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 243
;   LENGTH: 477
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-243

  Query Match             55.3%;  Score 63;  DB 7;  Length 477;
  Best Local Similarity   57.9%;  Pred. No. 0.029;
  Matches   11;  Conservative    2;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| ||| ::  ||  ||
Db         90 PRCGVPDVGHFRTFPGIPK 108


RESULT 9
US-10-131-826A-192
; Sequence 192, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
;  APPLICANT: Baker,Kevin P.
;  APPLICANT:  Beresini,Maureen
;  APPLICANT:  DeForge,Laura
;  APPLICANT:  Desnoyers,Luc
;  APPLICANT:  Filvaroff,Ellen
;  APPLICANT:  Gao,Wei-Qiang
;  APPLICANT:  Gerritsen,Mary E.
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Godowski,Paul J.
;  APPLICANT:  Gurney,Austin L.
;  APPLICANT:  Sherwood,Steven
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stewart,Timothy A.
;  APPLICANT:  Tumas,Daniel
;  APPLICANT:  Watanabe,Colin K
;  APPLICANT:  Wood,William
;  APPLICANT:  Zhang, Zemin
;  TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
;  TITLE OF INVENTION:  ACIDS ENCODING THE SAME
;  FILE REFERENCE: P3330R1C128
;  CURRENT APPLICATION NUMBER: US/10/131,826A
;  CURRENT FILING DATE:  2002-04-24
;  PRIOR APPLICATION NUMBER: 60/049911
;  PRIOR FILING DATE: 1997-06-18
;  PRIOR APPLICATION NUMBER: 60/056974
;  PRIOR FILING DATE: 1997-08-26
;  PRIOR APPLICATION NUMBER: 60/059113
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059115
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059117
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059122
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059184
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059263
;  PRIOR FILING DATE: 1997-09-18
;  PRIOR APPLICATION NUMBER: 60/059352
;  PRIOR FILING DATE: 1997-09-19
;  PRIOR APPLICATION NUMBER: 60/059588
;  PRIOR FILING DATE: 1997-09-19
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 192
;   LENGTH: 513
;   TYPE: PRT
;   ORGANISM: Homo Sapien
US-10-131-826A-192

  Query Match             44.7%;  Score 51;  DB 6;  Length 513;
  Best Local Similarity   61.5%;  Pred. No. 2;
```

```
  Matches    8;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNF 13
              |||| |||  | :
Db         89 PRCGVPDVGQYGY 101


RESULT 10
US-10-995-561-566
; Sequence 566, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
;  APPLICANT: CARGILL, Michele et al.
;  TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
;  TITLE OF INVENTION:  CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
;  TITLE OF INVENTION:  DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001559
;  CURRENT APPLICATION NUMBER: US/10/995,561
;  CURRENT FILING DATE:  2004-11-24
;  NUMBER OF SEQ ID NOS: 85702
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 566
;   LENGTH: 513
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-995-561-566

  Query Match            44.7%;  Score 51;  DB 6;  Length 513;
  Best Local Similarity  61.5%;  Pred. No. 2;
  Matches    8;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNF 13
              |||| |||  | :
Db         89 PRCGVPDVGQYGY 101


RESULT 11
US-10-503-575-150
; Sequence 150, Application US/10503575
; Publication No. US20050244823A1
; GENERAL INFORMATION:
;  APPLICANT: Drijfhout, Jan Wouter
;  APPLICANT:  van Veelen, Petrus Antonius
;  APPLICANT:  Koning, Frits
;  TITLE OF INVENTION: NOVEL EPITOPES FOR CELIAC DISEASE AND AUTOIMMUNE DISEASES, METHOD
;  TITLE OF INVENTION:  DETECTING THOSE AND NOVEL NON-ANTIGENIC FOOD COMPOUNDS
;  FILE REFERENCE: 2799/72843-PCT-US
;  CURRENT APPLICATION NUMBER: US/10/503,575
;  CURRENT FILING DATE:  2004-08-04
;  PRIOR APPLICATION NUMBER: PCT/NL03/00077
;  PRIOR FILING DATE: 2003-02-04
;  PRIOR APPLICATION NUMBER: EP 02075456.0
;  PRIOR FILING DATE: 2002-02-04
;  NUMBER OF SEQ ID NOS: 340
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 150
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-503-575-150

  Query Match            43.0%;  Score 49;  DB 6;  Length 19;
  Best Local Similarity  47.4%;  Pred. No. 0.14;
  Matches    9;  Conservative    2;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| :      |:
Db          1 PRCGVPDVAQFVLTEGNPR 19


RESULT 12
US-11-186-284-119
; Sequence 119, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 119
;   LENGTH: 469
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-119

  Query Match            43.0%;  Score 49;  DB 7;  Length 469;
  Best Local Similarity  47.4%;  Pred. No. 3.6;
  Matches    9;  Conservative    2;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKPK 19
              |||| |||| :      |:
Db         90 PRCGVPDVAQFVLTEGNPR 108


RESULT 13
US-11-186-284-123
; Sequence 123, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 123
;   LENGTH: 470
;   TYPE: PRT
```

```
;   ORGANISM: Homo Sapiens
US-11-186-284-123

  Query Match            41.2%;  Score 47;  DB 7;  Length 470;
  Best Local Similarity  44.4%;  Pred. No. 7.1;
  Matches    8;  Conservative    3;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFFPRKP 18
              |||| ||: ::   |  |
Db         90 PRCGVPDLHHFREMPGGP 107


RESULT 14
US-11-043-788-278
; Sequence 278, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 278
;   LENGTH: 225
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-278

  Query Match            39.5%;  Score 45;  DB 7;  Length 225;
  Best Local Similarity  50.0%;  Pred. No. 6.8;
  Matches    7;  Conservative    2;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFF 14
              |||| ||:  :  |
Db         97 PRCGVPDLGRFQTF 110


RESULT 15
US-11-043-788-277
; Sequence 277, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 277
;   LENGTH: 276
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-277

  Query Match            39.5%;  Score 45;  DB 7;  Length 276;
  Best Local Similarity  50.0%;  Pred. No. 8.3;
  Matches    7;  Conservative    2;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVANYNFF 14
              |||| ||:  :  |
Db         97 PRCGVPDLGRFQTF 110


Search completed: February 21, 2006, 08:26:28
Job time : 13.5 secs
```

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 07:54:15 ; Search time 13.9737 Seconds
(without alignments)
61.970 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	660	1	A28153	gelatinase A (EC 3
2	54	100.0	662	2	S70365	gelatinase A (EC 3
3	54	100.0	662	2	A42496	gelatinase A (EC 3
4	54	100.0	662	2	S34780	gelatinase A (EC 3
5	54	100.0	663	1	S46492	gelatinase A (EC 3
6	50	92.6	377	2	T00643	zinc metalloprotei
7	50	92.6	378	2	E96724	hypothetical prote
8	45	83.3	267	1	KCHUM	matrilysin (EC 3.4
9	45	83.3	267	2	A57490	matrilysin (EC 3.4
10	45	83.3	468	1	KCRBI	interstitial colla
11	45	83.3	469	1	KCBOI	interstitial colla
12	45	83.3	469	1	KCHUI	interstitial colla
13	45	83.3	469	1	KCPGI	interstitial colla
14	45	83.3	483	2	JC5743	matrix metalloprot
15	45	83.3	521	2	T37252	probable matrix me
16	42	77.8	504	2	P82253	amidophosphoribosy
17	41	75.9	82	2	PW0052	pro-matrix metallo
18	41	75.9	462	2	A42401	macrophage elastas
19	41	75.9	466	2	A23685	interstitial colla
20	41	75.9	470	2	A49499	metalloelastase HM
21	41	75.9	471	2	A53711	collagenase 3 (EC
22	41	75.9	472	2	S29243	interstitial colla
23	41	75.9	475	1	KCRTIH	stromelysin 1 (EC
24	41	75.9	476	1	JC6505	stromelysin 2 (EC
25	41	75.9	476	1	KCHUS2	stromelysin 2 (EC
26	41	75.9	476	1	KCRTS2	stromelysin 2 (EC
27	41	75.9	477	1	KCHUS1	stromelysin 1 (EC
28	41	75.9	477	1	KCMSS1	stromelysin 1 (EC
29	41	75.9	478	1	KCRBS1	stromelysin 1 (EC
30	41	75.9	587	2	S12805	envelysin (EC 3.4.
31	41	75.9	616	1	RRVQLL	probable RNA-direc
32	41	75.9	616	1	RRVQWA	probable RNA-direc
33	41	75.9	707	1	A53796	gelatinase B (EC 3
34	41	75.9	708	2	JC4364	gelatinase B (EC 3
35	41	75.9	708	2	S62907	gelatinase B (EC 3
36	41	75.9	712	1	I46031	gelatinase B (EC 3
37	41	75.9	730	1	I52580	gelatinase B (EC 3
38	41	75.9	730	2	JC1456	gelatinase B (EC 3
39	40	74.1	305	2	T08836	probable metallopr
40	40	74.1	477	1	I51645	stromelysin 3 (EC
41	38	70.4	707	1	A34458	gelatinase B (EC 3
42	38	70.4	712	2	AC1058	ribonucleoside-tri
43	38	70.4	885	2	D86151	F22M8.8 protein -
44	38	70.4	1531	2	T42218	slit-1 protein hom
45	37	68.5	341	2	T51957	metalloproteinase

ALIGNMENTS

RESULT 1
A28153
gelatinase A (EC 3.4.24.24) precursor - human
N;Alternate names: collagenase type IV; matrix metalloproteinase 2 (MMP2); progelatinase
C;Species: Homo sapiens (man)
C;Date: 28-Aug-1989 #sequence_revision 07-Jul-1995 #text_change 09-Jul-2004
C;Accession: A28153; A34202; A42225; A60187; S13858; S39436; A31480; S44432; A61498; S55
R;Collier, I.E.; Wilhelm, S.M.; Eisen, A.Z.; Marmer, B.L.; Grant, G.A.; Seltzer, J.L.; K
J. Biol. Chem. 263, 6579-6587, 1988
A;Title: H-ras oncogene-transformed human bronchial epithelial cells (TBE-1) secrete a s
A;Reference number: A28153; MUID:88198218; PMID:2834383
A;Accession: A28153
A;Molecule type: mRNA
A;Residues: 30-660 <COL>
A;Cross-references: UNIPROT:P08253; UNIPARC:UPI0000172CE7; GB:J03210; NID:g180670; PIDN
R;Huhtala, P.; Eddy, R.L.; Fan, Y.S.; Byers, M.G.; Shows, T.B.; Tryggvason, K.
Genomics 6, 554-559, 1990
A;Title: Completion of the primary structure of the human type IV collagenase preproenzy
A;Reference number: A34202; MUID:90228972; PMID:2158484
A;Accession: A34202
A;Molecule type: DNA
A;Residues: 1-51 <HU2>
A;Cross-references: UNIPARC:UPI000016A6E3; GB:M33789; NID:g180600; PIDN:AAA52027.1; PID:
R;Huhtala, P.; Chow, L.T.; Tryggvason, K.
J. Biol. Chem. 265, 11077-11082, 1990
A;Title: Structure of the human type IV collagenase gene.
A;Reference number: A42225; MUID:90293047; PMID:2162831
A;Accession: A42225
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-51;220-393 <HUH>
A;Cross-references: UNIPARC:UPI000016A6E3; UNIPARC:UPI0000172CE8; GB:M55593; GB:J05471;
A;Note: neither the complete amino acid nor the complete nucleotide sequence is given in
R;Frisch, S.M.; Reich, R.; Collier, I.E.; Genrich, L.T.; Martin, G.; Goldberg, G.I.
Oncogene 5, 75-83, 1990
A;Title: Adenovirus E1A represses protease gene expression and inhibits metastasis of hu
A;Reference number: A60187; MUID:90206614; PMID:2157183
A;Accession: A60187
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-58 <FRI>
A;Cross-references: UNIPARC:UPI0000172CE9
R;Okada, Y.; Morodomi, T.; Enghild, J.J.; Suzuki, K.; Yasui, A.; Nakanishi, I.; Salvesen
Eur. J. Biochem. 194, 721-730, 1990
A;Title: Matrix metalloproteinase 2 from human rheumatoid synovial fibroblasts. Purifica
A;Reference number: S13858; MUID:91099351; PMID:2269296
A;Accession: S13858
A;Molecule type: protein
A;Residues: 30-45;110-124 <OKA>
A;Cross-references: UNIPARC:UPI0000172CEA; UNIPARC:UPI0000172CEB
R;Crabbe, T.; Ioannou, C.; Docherty, A.J.P.
Eur. J. Biochem. 218, 431-438, 1993

A;Title: Human progelatinase A can be activated by autolysis at a rate that is concentra
A;Reference number: S39436; MUID:94094834; PMID:8269931
A;Accession: S39436
A;Molecule type: protein
A;Residues: 30-44;444-456 <CR2>
A;Cross-references: UNIPARC:UPI00000723BF; UNIPARC:UPI0000172CEC
R;Stetler-Stevenson, W.G.; Krutzsch, H.C.; Wacher, M.P.; Margulies, I.M.K.; Liotta, L.A.
J. Biol. Chem. 264, 1353-1356, 1989
A;Title: The activation of human type IV collagenase proenzyme. Sequence identification
A;Reference number: A31480; MUID:89109136; PMID:2536363
A;Accession: A31480
A;Molecule type: protein
A;Residues: 110-123 <STE>
A;Cross-references: UNIPARC:UPI0000158DA9
R;Crabbe, T.; Smith, B.; O'Connell, J.; Docherty, A.
FEBS Lett. 345, 14-16, 1994
A;Title: Human progelatinase A can be activated by matrilysin.
A;Reference number: S44432; MUID:94252395; PMID:8194591
A;Accession: S44432
A;Molecule type: protein
A;Residues: 110-115 <CRA>
A;Cross-references: UNIPARC:UPI0000172CED
R;Brown, D.; Chwa, M.; Escobar, M.; Kenney, M.C.
Exp. Eye Res. 52, 5-16, 1991
A;Title: Characterization of the major matrix degrading metalloproteinase of human corne
A;Reference number: A61498; MUID:91330998; PMID:1868885
A;Accession: A61498
A;Molecule type: protein
A;Residues: 'X',31,'X',33-46,'X',48-50,'Q' <BRO>
A;Cross-references: UNIPARC:UPI0000172CEE
A;Experimental source: corneal stroma
R;Itoh, Y.; Binner, S.; Nagase, H.
Biochem. J. 308, 645-651, 1995
A;Title: Steps involved in activation of the complex of pro-matrix metalloproteinase 2 (
A;Reference number: S55327; MUID:95290003; PMID:7772054
A;Accession: S55327
A;Molecule type: protein
A;Residues: 110-114 <ITO>
A;Cross-references: UNIPARC:UPI0000172CEF
C;Genetics:
A;Gene: GDB:MMP2; CLG4; CLG4A
A;Cross-references: GDB:120592; OMIM:120360
A;Map position: 16q13-16q13
A;Introns: 51/3; 127/2; 178/1; 220/1; 278/1; 336/1; 394/1; 446/1; 491/2; 537/1; 590/2; 6
C;Function:
A;Description: proteolytic cleavage of gelatin type I and collagen types IV, V, VII, and
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: extracellular matrix; fibroblast; glycoprotein; hydrolase; metalloproteinase
F;1-29/Domain: signal sequence #status predicted <SIG>
F;30-660/Product: progelatinase A #status predicted <PRO>
F;30-109/Domain: activation peptide #status predicted <ACT>
F;70-219,394-446/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;110-660/Product: gelatinase A #status predicted <MAT>
F;233-390/Region: collagen binding #status predicted
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;463-660/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted
F;469-660/Disulfide bonds: #status predicted
F;573,642/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 100.0%; Score 54; DB 1; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.13;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 2
S70365
gelatinase A (EC 3.4.24.24) precursor - rabbit
N;Alternate names: matrix metalloproteinase-2; type IV collagenase
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 21-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
C;Accession: S70365
R;Matsumoto, S.; Katoh, M.; Watanabe, T.; Masuho, Y.
Biochim. Biophys. Acta 1307, 137-139, 1996
A;Title: Molecular cloning of rabbit matrix metalloproteinase-2 and its broad expression
A;Reference number: S70365; MUID:96283805; PMID:8679695
A;Accession: S70365
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <MAT>
A;Cross-references: UNIPROT:P50757; UNIPARC:UPI000012F23F; EMBL:D63579; NID:g944816; PID
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F2>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

Query Match 100.0%; Score 54; DB 2; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.13;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 3
A42496
gelatinase A (EC 3.4.24.24) precursor - mouse
N;Alternate names: collagenase type IV, 72K
C;Species: Mus musculus (house mouse)
C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A42496
R;Reponen, P.; Sahlberg, C.; Huhtala, P.; Hurskainen, T.; Thesleff, I.; Tryggvason, K.
J. Biol. Chem. 267, 7856-7862, 1992
A;Title: Molecular cloning of murine 72-kDa type IV collagenase and its expression during
A;Reference number: A42496; MUID:92218452; PMID:1373140
A;Accession: A42496
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <REP>
A;Cross-references: UNIPROT:P33434; UNIPARC:UPI0000002777E; GB:M84324; NID:g198465; PIDN:
A;Note: sequence extracted from NCBI backbone (NCBIN:96943, NCBIP:96945)
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

Query Match 100.0%; Score 54; DB 2; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.13;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 4
S34780

```
gelatinase A (EC 3.4.24.24) precursor - rat
N;Alternate names: collagenase type IV
C;Species: Rattus norvegicus (Norway rat)
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Accession: S34780; S32525
R;Lovett, D.H.
submitted to the EMBL Data Library, June 1993
A;Reference number: S34780
A;Accession: S34780
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <LOV>
A;Cross-references: UNIPROT:P33436; UNIPARC:UPI000012F240; EMBL:X71466; NID:g311750; PID
R;Marti, H.P.; McNeil, L.; Davies, M.; Martin, J.; Lovett, D.H.
Biochem. J. 291, 441-446, 1993
A;Title: Homology cloning of rat 72 kDa type IV collagenase: cytokine and second-messeng
A;Reference number: S32525; MUID:93249363; PMID:7916617
A;Accession: S32525
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 'R',27-662 <MAR>
A;Cross-references: UNIPARC:UPI0000175D90; EMBL:X71466
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

  Query Match             100.0%;  Score 54;  DB 2;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.13;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 5
S46492
gelatinase A (EC 3.4.24.24) precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S46492
R;Aimes, R.T.; French, D.L.; Quigley, J.P.
Biochem. J. 300, 729-736, 1994
A;Title: Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from chicken embryo f
A;Reference number: S46492; MUID:94280397; PMID:8010954
A;Accession: S46492
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-663 <AIM>
A;Cross-references: UNIPROT:Q90611; UNIPARC:UPI000012F23E; EMBL:U07775; NID:g504475; PID
A;Note: in the authors' translation 205-Asp is shown after residue 201 and, consequently
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;67-216,391-443/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;230-271/Domain: fibronectin type II repeat homology <2F1>
F;288-329/Domain: fibronectin type II repeat homology <2F8>
F;346-387/Domain: fibronectin type II repeat homology <2F9>
F;466-663/Domain: hemopexin repeat homology <PXN>
F;99,400,404,410/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;400,404,410/Binding site: zinc, catalytic (His) (active) #status predicted
F;401/Active site: Glu #status predicted

  Query Match             100.0%;  Score 54;  DB 1;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.13;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 6
T00643
zinc metalloproteinase homolog F3I6.6 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 09-Jul-2004
C;Accession: T00643
R;Federspiel, N.A.; Palm, C.J.; Conway, A.B.; Kurtz, D.B.; Conway, A.R.; Au, M.; Araujo,
; Vysotskaia, V.S.; Yu, G.; Ecker, J.; Theologis, A.; Davis, R.W.
submitted to the EMBL Data Library, February 1998
A;Reference number: Z14197
A;Accession: T00643
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-377 <FED>
A;Cross-references: UNIPROT:O48680; UNIPARC:UPI00000AB794; EMBL:AC002396; NID:g2749918;
A;Experimental source: cultivar Columbia
C;Genetics:
A;Gene: ATSP:F3I6.6
A;Map position: 1

  Query Match             92.6%;  Score 50;  DB 2;  Length 377;
  Best Local Similarity   100.0%;  Pred. No. 0.37;
  Matches    8;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              ||||||||
Db        114 PRCGNPDV 121


RESULT 7
E96724
hypothetical protein F20P5.11 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Accession: E96724
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso,
 Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.;
ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali,
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon,
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
A;Accession: E96724
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-378 <STO>
A;Cross-references: UNIPROT:O04529; UNIPARC:UPI00000A9048; GB:AE005173; NID:g2194124; PI
C;Genetics:
A;Gene: F20P5.11
A;Map position: 1

  Query Match             92.6%;  Score 50;  DB 2;  Length 378;
  Best Local Similarity   100.0%;  Pred. No. 0.37;
  Matches    8;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              ||||||||
Db        118 PRCGNPDV 125


RESULT 8
KCHUM
matrilysin (EC 3.4.24.23) precursor - human
N;Alternate names: matrin; matrix metalloproteinase 7 (MMP7); probable metalloproteinase
N;Contains: promatrilysin
```

```
C;Species: Homo sapiens (man)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: B28816; A60539; S24324
R;Muller, D.; Quantin, B.; Gesnel, M.C.; Millon-Collard, R.; Abecassis, J.; Breathnach,
Biochem. J. 253, 187-192, 1988
A;Title: The collagenase gene family in humans consists of at least four members.
A;Reference number: A90339; MUID:88339885; PMID:2844164
A;Accession: B28816
A;Molecule type: mRNA
A;Residues: 1-267 <MUL>
A;Cross-references: UNIPROT:P09237; UNIPARC:UPI00000422BD; EMBL:X07819; NID:g35798; PIDN
R;Miyazaki, K.; Hattori, Y.; Umenishi, F.; Yasumitsu, H.; Umeda, M.
Cancer Res. 50, 7758-7764, 1990
A;Title: Purification and characterization of extracellular matrix-degrading metalloprot
A;Reference number: A60539; MUID:91070531; PMID:2253219
A;Accession: A60539
A;Molecule type: protein
A;Residues: 18-35,'X',37-42 <MIY>
A;Cross-references: UNIPARC:UPI0000172CE6
R;Marti, H.P.; McNeil, L.; Thomas, G.; Davies, M.; Lovett, D.H.
Biochem. J. 285, 899-905, 1992
A;Title: Molecular characterization of a low-molecular-mass matrix metalloproteinase sec
A;Reference number: S24324; MUID:92359961; PMID:1497627
A;Accession: S24324
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-267 <MAR>
A;Cross-references: UNIPARC:UPI00000422BD; EMBL:Z11887; NID:g35802; PIDN:CAA77942.1; PID
C;Comment: This enzyme is similar in its activity to stromelysin and degrades various ex
s of types II, IV, IX, X, and XI.
C;Comment: Matrilysin hydrolyzes peptide bonds in plasminogen to yield a fragment with a
C;Genetics:
A;Gene: GDB:MMP7; MPSL1
A;Cross-references: GDB:125751; OMIM:178990
A;Map position: 11q21-11q22
C;Superfamily: matrilysin; matrix metalloproteinase homology
C;Keywords: calcium; extracellular matrix; fibroblast; hydrolase; metalloproteinase; zin
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-267/Product: promatrilysin #status predicted <PRO>
F;18-94/Domain: activation peptide #status predicted <ACT>
F;55-259/Domain: matrix metalloproteinase homology <MMP>
F;85-92/Region: autoinhibitory
F;95-267/Product: matrilysin #status predicted <MAT>
F;87,214,218,224/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;214,218,224/Binding site: zinc, catalytic (His) (active) #status predicted
F;215/Active site: Glu #status predicted

  Query Match             83.3%;  Score 45;  DB 1;  Length 267;
  Best Local Similarity   88.9%;  Pred. No. 2;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         85 PRCGVPDVA 93


RESULT 9
A57490
matrilysin (EC 3.4.24.23) precursor - rat
N;Alternate names: matrix metalloproteinase 7 (MMP7)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 08-Dec-1995 #sequence_revision 08-Dec-1995 #text_change 09-Jul-2004
C;Accession: A57490
R;Abramson, S.R.; Conner, G.E.; Nagase, H.; Neuhaus, I.; Woessner Jr., J.F.
J. Biol. Chem. 270, 16016-16022, 1995
A;Title: Characterization of rat uterine matrilysin and its cDNA. Relationship to human
A;Reference number: A57490; MUID:95332299; PMID:7608162
A;Accession: A57490
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-267 <ABR>
A;Cross-references: UNIPROT:P50280; UNIPARC:UPI000012F244; GB:L24374; NID:g402492; PIDN:
C;Superfamily: matrilysin; matrix metalloproteinase homology
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-267/Product: matrilysin #status predicted <MAT>
F;58-262/Domain: matrix metalloproteinase homology <MMP>
F;90,217,221,227/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;217,221,227/Binding site: zinc, catalytic (His) (active) #status predicted
F;218/Active site: Glu #status predicted

  Query Match             83.3%;  Score 45;  DB 2;  Length 267;
  Best Local Similarity   88.9%;  Pred. No. 2;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         88 PRCGVPDVA 96


RESULT 10
KCRBI
interstitial collagenase (EC 3.4.24.7) precursor - rabbit
N;Alternate names: fibroblast collagenase; matrix metalloproteinase 1 (MMP1); tissue col
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: A27500; B27500; I46694
R;Fini, M.E.; Plucinska, I.M.; Mayer, A.S.; Gross, R.H.; Brinckerhoff, C.E.
Biochemistry 26, 6156-6165, 1987
A;Title: A gene for rabbit synovial cell collagenase: member of a family of metalloprote
A;Reference number: A27500; MUID:88077876; PMID:2825772
A;Accession: A27500
A;Molecule type: mRNA
A;Residues: 1-468 <FIN>
A;Cross-references: UNIPROT:P13943; UNIPARC:UPI000012F23B; GB:M19240
A;Accession: B27500
A;Molecule type: DNA
A;Residues: 1-391;399-468 <FI2>
A;Cross-references: UNIPARC:UPI0000172CC6; UNIPARC:UPI0000172CC7; GB:M17820
A;Note: the location of the intron between exons 7 and 8 is approximate
R;Fini, M.E.; Austin, S.D.; Holt, P.T.; Ruby, P.L.; Gross, R.H.; White, H.D.; Brinckerhof
Coll. Relat. Res. 6, 239-248, 1986
A;Title: Homology between exon-containing portions of rabbit genomic clones for synovial
A;Reference number: I46694; MUID:87029174; PMID:3021384
A;Accession: I46694
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 449-468 <FI3>
A;Cross-references: UNIPARC:UPI000016C460; GB:M25663; NID:g531211; PIDN:AAA31203.1; PID:
C;Comment: This enzyme cleaves collagens of types I, II, and III at a Gly-Ile site in th
C;Comment: Procollagenase can be activated without removal of the activation peptide. St
tion peptide by other proteinases.
C;Comment: Procollagenase is found in glycosylated and unglycosylated forms, both of whi
C;Genetics:
A;Introns: 34/3; 116/2; 166/1; 208/1; 260/1; 299/2; 344/1; 398/1; 433/1
C;Function:
A;Description: hydrolyzes collagens, in particular types I, II, III, and X, serpins, and
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-18/Domain: signal sequence #status predicted <SIG>
F;19-468/Product: procollagenase #status predicted <PRO>
F;19-98/Domain: activation peptide #status predicted <ACT>
F;59-260/Domain: matrix metalloproteinase homology <MMP>
F;89-96/Region: autoinhibitory
F;99-468/Product: interstitial collagenase #status predicted <MAT>
F;271-465/Domain: hemopexin repeat homology <PXN>
F;91,217,221,227/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;119,142/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;217,221,227/Binding site: zinc, catalytic (His) (active) #status predicted
F;218/Active site: Glu #status predicted
F;277-465/Disulfide bonds: #status predicted

  Query Match             83.3%;  Score 45;  DB 1;  Length 468;
  Best Local Similarity   88.9%;  Pred. No. 3.3;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVA 9
              |||| ||||
Db         89 PRCGVPDVA 97


RESULT 11
KCBOI
interstitial collagenase (EC 3.4.24.7) precursor - bovine
N;Alternate names: fibroblast collagenase; matrix metalloproteinase 1 (MMP1); tissue col
C;Species: Bos primigenius taurus (cattle)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: S14654; S20336; S14655
R;Tamura, M.; Shimokawa, H.; Sasaki, S.
submitted to the EMBL Data Library, March 1991
A;Reference number: S14654
A;Accession: S14654
A;Molecule type: mRNA
A;Residues: 1-469 <TAM>
A;Cross-references: UNIPROT:P28053; UNIPARC:UPI000012F238; EMBL:X58256; NID:g259; PIDN:C
R;Sudbeck, B.D.; Jeffrey, J.J.; Welgus, H.G.; Mecham, R.P.; McCourt, D.; Parks, W.C.
Arch. Biochem. Biophys. 293, 370-376, 1992
A;Title: Purification and characterization of bovine interstitial collagenase and tissue
A;Reference number: S20336; MUID:92161820; PMID:1311165
A;Accession: S20336
A;Molecule type: protein
A;Residues: 19-21,'FP',24-29,'L',31-34,'LL',37-39,'F';86-105,'NPR',109-112,'D',114-125 <
A;Cross-references: UNIPARC:UPI0000172CC8; UNIPARC:UPI0000172CC9
C;Comment: This enzyme cleaves collagens of types I, II, and III at a Gly-Ile site in th
C;Comment: Procollagenase can be activated without removal of the activation peptide. St
tion peptide by other proteinases.
C;Comment: Procollagenase is found in glycosylated and unglycosylated forms, both of whi
C;Function:
A;Description: hydrolyzes collagens, in particular types I, II, III, and X, serpins, and
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-18/Domain: signal sequence #status predicted <SIG>
F;19-469/Product: procollagenase #status predicted <PRO>
F;19-99/Domain: activation peptide #status predicted <ACT>
F;60-261/Domain: matrix metalloproteinase homology <MMP>
F;90-97/Region: autoinhibitory
F;100-469/Product: interstitial collagenase #status predicted <MAT>
F;272-466/Domain: hemopexin repeat homology <PXN>
F;92,218,222,228/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;120,143/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;218,222,228/Binding site: zinc, catalytic (His) (active) #status predicted
F;219/Active site: Glu #status predicted
F;278-466/Disulfide bonds: #status predicted

  Query Match             83.3%;  Score 45;  DB 1;  Length 469;
  Best Local Similarity   88.9%;  Pred. No. 3.3;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         90 PRCGVPDVA 98


RESULT 12
KCHUI
interstitial collagenase (EC 3.4.24.7) precursor [validated] - human
N;Alternate names: fibroblast collagenase; matrix metalloproteinase 1 (MMP1); tissue col
C;Species: Homo sapiens (man)
C;Date: 13-Aug-1986 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: A37308; S22766; I57620; A00996; D29157; A44518; S06132; B60964; S10595; S53
R;Templeton, N.S.; Brown, P.D.; Levy, A.T.; Margulies, I.M.K.; Liotta, L.A.; Stetler-Ste
Cancer Res. 50, 5431-5437, 1990
A;Title: Cloning and characterization of human tumor cell interstitial collagenase.
A;Reference number: A37308; MUID:90352587; PMID:2167156
A;Accession: A37308
A;Molecule type: mRNA
A;Residues: 1-469 <TEM>
A;Cross-references: UNIPROT:P03956; UNIPARC:UPI00000422BA; GB:X54925; NID:g30125; PIDN:C
R;Brinckerhoff, C.E.; Ruby, P.L.; Austin, S.D.; Fini, M.E.; White, H.D.
J. Clin. Invest. 79, 542-546, 1987
A;Title: Molecular cloning of human synovial cell collagenase and selection of a single
A;Reference number: S22766; MUID:87109799; PMID:3027129
A;Accession: S22766
A;Molecule type: DNA
A;Residues: 1-63,65-70 <BRI>
A;Cross-references: UNIPARC:UPI0000172CBC; EMBL:M15996; NID:g180666; PIDN:AAA35700.1; PI
R;Angel, P.; Baumann, I.; Stein, B.; Delius, H.; Rahmsdorf, H.J.; Herrlich, P.
Mol. Cell. Biol. 7, 2256-2266, 1987
A;Title: 12-O-tetradecanoyl-phorbol-13-acetate induction of the human collagenase gene i
A;Reference number: I57620; MUID:87257941; PMID:3037355
A;Accession: I57620
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI000016A6ED; GB:M16567; NID:g180668; PIDN:AAA52033.1; PID:
R;Goldberg, G.I.; Wilhelm, S.M.; Kronberger, A.; Bauer, E.A.; Grant, G.A.; Eisen, A.Z.
J. Biol. Chem. 261, 6600-6605, 1986
A;Title: Human fibroblast collagenase. Complete primary structure and homology to an onc
A;Reference number: A00996; MUID:86196089; PMID:3009463
A;Accession: A00996
A;Molecule type: mRNA
A;Residues: 1-114,'R',116-409,'S',411-469 <GOL>
A;Cross-references: UNIPARC:UPI0000141EC4; GB:M13509; NID:g180664; PIDN:AAA35699.1; PID:
A;Note: part of this sequence was confirmed by protein sequencing of the proenzyme
R;Whitham, S.E.; Murphy, G.; Angel, P.; Rahmsdorf, H.J.; Smith, B.J.; Lyons, A.; Harris,
Biochem. J. 240, 913-916, 1986
A;Title: Comparison of human stromelysin and collagenase by cloning and sequence analysi
A;Reference number: A90336; MUID:87156645; PMID:3030290
A;Accession: D29157
A;Molecule type: mRNA
A;Residues: 1-199,'H',201-207,'T',209-469 <WHI>
A;Cross-references: UNIPARC:UPI0000172CBD; EMBL:X05231; NID:g38266; PIDN:CAA28858.1; PID
A;Note: parts of this sequence, including the amino end of the proenzyme and of the matu
R;Birkedal-Hansen, B.; Moore, W.G.I.; Taylor, R.E.; Bhown, A.S.; Birkedal-Hansen, H.
Biochemistry 27, 6751-6758, 1988
A;Title: Monoclonal antibodies to human fibroblast procollagenase. Inhibition of enzymat
end of the activated enzyme.
A;Reference number: A44518; MUID:89062403; PMID:2461732
A;Accession: A44518
A;Molecule type: protein
A;Residues: 270-305 <BIR>
A;Cross-references: UNIPARC:UPI0000172CBE
R;Clark, I.M.; Cawston, T.E.
Biochem. J. 263, 201-206, 1989
A;Title: Fragments of human fibroblast collagenase. Purification and characterization.
A;Reference number: S06132; MUID:90104231; PMID:2557822
A;Accession: S06132
A;Status: preliminary
A;Molecule type: protein
A;Residues: 100-102,'P',104-107,'XX',110-112;270-277,'X',279-280,'X',282-287 <CLA>
A;Cross-references: UNIPARC:UPI0000172CBF; UNIPARC:UPI0000172CC0
R;Lark, M.W.; Walakovits, L.A.; Shah, T.K.; Vanmiddlesworth, J.; Cameron, P.M.; Lin, T.Y
Connect. Tissue Res. 25, 49-65, 1990
A;Title: Production and purification of prostromelysin and procollagenase from IL-1 beta
A;Reference number: A60964; MUID:91059606; PMID:2173990
A;Accession: B60964
A;Molecule type: protein
A;Residues: 24-35;100-108;270-272,'X',274,'X',276 <LAR>
A;Cross-references: UNIPARC:UPI0000172CC1; UNIPARC:UPI0000172CC2; UNIPARC:UPI0000172CC3
R;Suzuki, K.; Nagase, H.; Ito, A.; Enghild, J.J.; Salvesen, G.
Biol. Chem. Hoppe-Seyler 371(Suppl.), 305-310, 1990
A;Title: The role of matrix metalloproteinase 3 in the stepwise activation of human rheu
A;Reference number: S10595; MUID:90380300; PMID:2169257
A;Accession: S10595
A;Molecule type: protein
A;Residues: 20-102 <SUZ>
A;Cross-references: UNIPARC:UPI0000172CC4
R;Suzuki, K.; Lees, M.; Newlands, G.F.J.; Nagase, H.; Woolley, D.E.
Biochem. J. 305, 301-306, 1995
A;Title: Activation of precursors for matrix metalloproteinases 1 (interstitial collagen
A;Reference number: S53438; MUID:95126921; PMID:7826345
A;Accession: S53438
```

```
A;Status: preliminary
A;Molecule type: protein
A;Residues: 20-108 <SU2>
A;Cross-references: UNIPARC:UPI0000172CC5
R;Springman, E.B.; Angleton, E.L.; Birkedal-Hansen, H.; Van Wart, H.E.
Proc. Natl. Acad. Sci. U.S.A. 87, 364-368, 1990
A;Title: Multiple modes of activation of latent human fibroblast collagenase: evidence f
A;Reference number: A44517; MUID:90115877; PMID:2153297
A;Contents: annotation; disulfide bond; activation mechanism
R;Salowe, S.P.; Marcy, A.I.; Cuca, G.C.; Smith, C.K.; Kopka, I.E.; Hagmann, W.K.; Hermes
Biochemistry 31, 4535-4540, 1992
A;Title: Characterization of zinc-binding sites in human stromelysin-1: stoichiometry of
A;Reference number: A43031; MUID:92256384; PMID:1581308
A;Contents: annotation; zinc ligand in proenzyme
A;Note: Cys-92 binds zinc in the proenzyme. Both active and proenzyme forms of the catal
C;Comment: Procollagenase can be activated without removal of the activation peptide. St
tion peptide by other proteinases.
C;Comment: Procollagenase is found in glycosylated and unglycosylated forms, both of whi
C;Genetics:
A;Gene: GDB:MMP1; CLG
A;Cross-references: GDB:119783; OMIM:120353
A;Map position: 11q22.2-11q22.3
C;Function:
A;Description: hydrolyzes collagens, in particular types I, II, III, and X, serpins, and
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallop
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-469/Product: procollagenase #status experimental <PRO>
F;20-99/Domain: activation peptide #status experimental <ACT>
F;60-261/Domain: matrix metalloproteinase homology <MMP>
F;90-97/Region: autoinhibitory
F;100-469/Product: interstitial collagenase #status experimental <MAT>
F;272-466/Domain: hemopexin repeat homology <PXN>
F;92,218,222,228/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;120,143/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;218,222,228/Binding site: zinc, catalytic (His) (active) #status predicted
F;219/Active site: Glu #status predicted
F;269-270/Cleavage site: Pro-Ile (autolytic) #status experimental
F;278-466/Disulfide bonds: #status experimental

  Query Match             83.3%;  Score 45;  DB 1;  Length 469;
  Best Local Similarity   88.9%;  Pred. No. 3.3;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         90 PRCGVPDVA 98


RESULT 13
KCPGI
interstitial collagenase (EC 3.4.24.7) precursor [validated] - pig
N;Alternate names: fibroblast collagenase; matrix metalloproteinase 1 (MMP1); tissue col
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: S15986; S13597
R;Richards, C.D.; Rafferty, J.A.; Reynolds, J.J.; Saklatvala, J.
Matrix 11, 161-167, 1991
A;Title: Porcine collagenase from synovial fibroblasts: cDNA sequence and modulation of
A;Reference number: S15986; MUID:91333421; PMID:1651440
A;Accession: S15986
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-469 <RIC>
A;Cross-references: UNIPROT:P21692; UNIPARC:UPI000012F23A
A;Note: part of the sequence, including the amino end of the proenzyme, was confirmed by
R;Clarke, N.J.; O'Hare, M.C.; Cawston, T.E.; Harper, G.P.
Nucleic Acids Res. 18, 6703, 1990
A;Title: Nucleotide sequence of a cDNA for porcine type I collagenase, obtained by PCR.
A;Reference number: S13597; MUID:91067477; PMID:2174547
A;Accession: S13597
A;Molecule type: mRNA
A;Residues: 25-469 <CLA>
A;Cross-references: UNIPARC:UPI000016C6D5; EMBL:X54724; NID:g2016; PIDN:CAA38526.1; PID:g
R;Li, J.; Brick, P.; Blow, D.M.
submitted to the Brookhaven Protein Data Bank, April 1995
A;Reference number: A65568; PDB:1FBL
A;Contents: annotation; X-ray crystallography, 2.5 angstroms, residues 100-466
C;Comment: Procollagenase can be activated without removal of the activation peptide. Sti
tion peptide by other proteinases.
C;Comment: Procollagenase is found in glycosylated and unglycosylated forms, both of whic
C;Function:
A;Description: hydrolyzes collagens, in particular types I, II, III, and X, serpins, and
A;Note: also hydrolyzes type X collagen, serpins, and alpha-macroglobulins
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotein
C;Keywords: calcium; extracellular matrix; fibroblast; glycoprotein; hydrolase; metallopr
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-469/Product: procollagenase #status predicted <PRO>
F;20-99/Domain: activation peptide #status experimental <ACT>
F;60-261/Domain: matrix metalloproteinase homology <MMP>
F;100-469/Product: interstitial collagenase #status predicted <MAT>
F;272-466/Domain: hemopexin repeat homology <PXN>
F;92,218,222,228/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status p
F;120,143/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;218,222,228/Binding site: zinc, catalytic (His) (active) #status experimental
F;219/Active site: Glu #status predicted
F;278-466/Disulfide bonds: #status experimental

  Query Match             83.3%;  Score 45;  DB 1;  Length 469;
  Best Local Similarity   88.9%;  Pred. No. 3.3;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         90 PRCGVPDVA 98


RESULT 14
JC5743
matrix metalloproteinase (EC 3.4.24.-) precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 09-Dec-1997 #sequence_revision 23-Jan-1998 #text_change 09-Jul-2004
C;Accession: JC5743
R;Bartlett, J.D.; Simmer, J.P.; Xue, J.; Margolis, H.C.; Moreno, E.C.
Gene 183, 123-128, 1996
A;Title: Molecular cloning and mRNA tissue distribution of a novel matrix metalloproteina
A;Reference number: JC5743; MUID:97149288; PMID:8996096
A;Accession: JC5743
A;Molecule type: mRNA
A;Residues: 1-483 <BAR>
A;Cross-references: UNIPROT:P79287; UNIPARC:UPI000012F257; GB:U54825; NID:g1800212; PIDN:
A;Experimental source: enamel organ
C;Comment: This enzyme plays a role in enamel biomineralization and development.
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotein
C;Keywords: hydrolase; metalloproteinase; zinc
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-483/Product: matrix metalloproteinase #status predicted <MAT>
F;68-271/Domain: matrix metalloproteinase homology <MMP>
F;290-483/Domain: hemopexin repeat homology <PXN>
F;100,226,230,236/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;226,230,236/Binding site: zinc, catalytic (His) #status predicted
F;227/Active site: Glu #status predicted

  Query Match             83.3%;  Score 45;  DB 2;  Length 483;
  Best Local Similarity   88.9%;  Pred. No. 3.4;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         98 PRCGVPDVA 106


RESULT 15
T37252
probable matrix metalloproteinase (EC 3.4.24.-) - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
```

C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: T37252
R;Wada, K.; Sato, H.; Kinoh, H.; Kajita, M.; Yamamoto, H.; Seiki, M.
Gene 211, 57-62, 1998
A;Title: Cloning of three Caenorhabditis elegans genes potentially encoding novel matrix
A;Reference number: Z21645; MUID:98241501; PMID:9573338
A;Accession: T37252
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-521 <WAD>
A;Cross-references: UNIPROT:O61266; UNIPARC:UPI00000824F5; EMBL:AB007817; NID:g3152405;
A;Experimental source: strain N2
C;Superfamily: interstitial collagenase; hemopexin repeat homology; matrix metalloprotei
C;Keywords: hydrolase; metalloproteinase

Query Match 83.3%; Score 45; DB 2; Length 521;
Best Local Similarity 87.5%; Pred. No. 3.7;
Matches 7; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDV 8
              ||||:|||
Db         78 PRCGHPDV 85
```

Search completed: February 21, 2006, 08:01:07
Job time : 13.9737 secs

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:31:04 ; Search time 90.2368 Seconds
(without alignments)
70.368 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 17

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	112	2	Q9N1T9_CANFA	Q9n1t9 canis famil
2	54	100.0	223	2	Q4KLF6_XENLA	Q4klf6 xenopus lae
3	54	100.0	559	2	Q7SYA5_XENLA	Q7sya5 xenopus lae
4	54	100.0	595	2	Q6GQI1_XENLA	Q6gqi1 xenopus lae
5	54	100.0	632	2	Q9N1P6_CANFA	Q9n1p6 canis famil
6	54	100.0	654	2	Q6U7G9_MELGA	Q6u7g9 meleagris g
7	54	100.0	655	2	Q5FVW8_XENTR	Q5fvw8 xenopus tro
8	54	100.0	656	2	Q8UUZ3_XENLA	Q8uuz3 xenopus lae
9	54	100.0	660	1	MMP2_HUMAN	P08253 homo sapien
10	54	100.0	660	2	Q5IY21_TUPGB	Q5iy21 tupaia glis
11	54	100.0	661	2	Q95JA4_PIG	Q95ja4 sus scrofa
12	54	100.0	661	2	Q9GLE5_BOVIN	Q9gle5 bos taurus
13	54	100.0	662	1	MMP2_MOUSE	P33434 mus musculu
14	54	100.0	662	1	MMP2_RABIT	P50757 oryctolagus
15	54	100.0	662	1	MMP2_RAT	P33436 rattus norv
16	54	100.0	662	2	Q6GMM9_RAT	Q6gmm9 rattus norv
17	54	100.0	663	1	MMP2_CHICK	Q90611 gallus gall

ALIGNMENTS

RESULT 1
Q9N1T9_CANFA
ID Q9N1T9_CANFA PRELIMINARY; PRT; 112 AA.
AC Q9N1T9;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Matrix metalloproteinase-2 (Fragment).
GN Name=MMP-2;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Fibrosarcoma;
RA Jahic H., Kitchell B.E., Paria B.C.;
RL Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AF147750; AAF67001.1; -; mRNA.
DR HSSP; P08253; 1GXD.
DR MEROPS; M10.003; -.
DR Ensembl; ENSCAFG00000009421; Canis familiaris.
DR GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000794; Ketoacyl_synth.
DR InterPro; IPR001818; Pept_M10A_M12B.
DR Pfam; PF03933; Peptidase_M10_N; 1.
DR PROSITE; PS00606; B_KETOACYL_SYNTHASE; UNKNOWN_1.
DR PROSITE; PS00546; CYSTEINE_SWITCH; 1.
FT NON_TER 1 1
FT NON_TER 112 112
SQ SEQUENCE 112 AA; 12110 MW; 7FD7259CAACD9617 CRC64;

Query Match 100.0%; Score 54; DB 2; Length 112;
Best Local Similarity 100.0%; Pred. No. 0.076;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db         94 PRCGNPDVA 102
```

RESULT 2
Q4KLF6_XENLA
ID Q4KLF6_XENLA PRELIMINARY; PRT; 223 AA.
AC Q4KLF6;
DT 13-SEP-2005 (TrEMBLrel. 31, Created)
DT 13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE Hypothetical protein.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC Xenopodinae; Xenopus; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA Richardson P.;
RT "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT initiative.";
RL Dev. Dyn. 225:384-391(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

```
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Gerhard D.S.;
RL   Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC099241; AAH99241.1; -; mRNA.
KW   Hypothetical protein.
SQ   SEQUENCE   223 AA;  25889 MW;  AB815A358ECD68F1 CRC64;

  Query Match           100.0%;  Score 54;  DB 2;  Length 223;
  Best Local Similarity  100.0%;  Pred. No. 0.15;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         96 PRCGNPDVA 104


RESULT 3
Q7SYA5_XENLA
ID   Q7SYA5_XENLA PRELIMINARY;      PRT;   559 AA.
AC   Q7SYA5;
DT   01-OCT-2003 (TrEMBLrel. 25, Created)
DT   01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Mmp2-prov protein.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Strausberg R.;
RL   Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC054947; AAH54947.1; -; mRNA.
DR   HSSP; P08253; 1HOV.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 2.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 2.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   559 AA;  63084 MW;  F27BD8ACE59E4B52 CRC64;

  Query Match           100.0%;  Score 54;  DB 2;  Length 559;
  Best Local Similarity  100.0%;  Pred. No. 0.39;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         96 PRCGNPDVA 104


RESULT 4
Q6GQI1_XENLA
ID   Q6GQI1_XENLA PRELIMINARY;      PRT;   595 AA.
AC   Q6GQI1;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2-prov protein (Fragment).
GN   Name=mmp2-prov;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
```

```
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RA   Klein S., Strausberg R.;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC072762; AAH72762.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 3.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER      595    595
SQ   SEQUENCE   595 AA;  67335 MW;  688556DF6039FF83 CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 595;
  Best Local Similarity   100.0%;  Pred. No. 0.42;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         96 PRCGNPDVA 104


RESULT 5
Q9N1P6_CANFA
ID   Q9N1P6_CANFA PRELIMINARY;      PRT;   632 AA.
AC   Q9N1P6;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase-2 (Fragment).
GN   Name=MMP-2;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC   Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Fibrosarcoma;
RA   Jahic H., Paria B., Balkin R., Baxendale V., Fang Y., Kitchell B.;
RL   Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF177217; AAF67517.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSCAFG00000009421; Canis familiaris.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER      1      1
SQ   SEQUENCE   632 AA;  70991 MW;  D8AE895497E129F3 CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 632;
  Best Local Similarity   100.0%;  Pred. No. 0.45;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         72 PRCGNPDVA 80


RESULT 6
Q6U7G9_MELGA
ID   Q6U7G9_MELGA PRELIMINARY;      PRT;   654 AA.
AC   Q6U7G9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Gelatinase A.
OS   Meleagris gallopavo (Common turkey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Meleagris.
OX   NCBI_TaxID=9103;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Monsonego Ornan E., Tong A.;
RL   Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY376899; AAQ98971.1; -; mRNA.
DR   HSSP; P08254; 1B3D.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
```

```
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   654 AA;  73956 MW;  F9B0755F76B6F8DD CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 654;
  Best Local Similarity   100.0%;  Pred. No. 0.46;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 7
Q5FVW8_XENTR
ID   Q5FVW8_XENTR PRELIMINARY;      PRT;   655 AA.
AC   Q5FVW8;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   MGC108375 protein.
GN   Name=MGC108375;
OS   Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Silurana.
OX   NCBI_TaxID=8364;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RA   Klein S., Gerhard D.S.;
RL   Submitted (FEB-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC089734; AAH89734.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR002477; PGBD_1.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   655 AA;  74345 MW;  2AFD4C93786A625C CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 655;
  Best Local Similarity   100.0%;  Pred. No. 0.46;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         95 PRCGNPDVA 103


RESULT 8
Q8UUZ3_XENLA
ID   Q8UUZ3_XENLA PRELIMINARY;      PRT;   656 AA.
AC   Q8UUZ3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=21888509; PubMed=11891989; DOI=10.1002/dvdy.10069;
RA   Jung J.C., Leco K.J., Edwards D.R., Fini M.E.;
RT   "Matrix metalloproteinases mediate the dismantling of mesenchymal
RT   structures in the tadpole tail during thyroid hormone-induced tail
RT   resorption.";
RL   Dev. Dyn. 223:402-413(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RA   Leco K., Jung J.-C., Fini M., Edwards D.R.;
RL   Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY037943; AAL01591.1; -; mRNA.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 2.
```

```
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   656 AA;  74272 MW;  50C28A99C427F51D CRC64;

  Query Match           100.0%;  Score 54;  DB 2;  Length 656;
  Best Local Similarity  100.0%;  Pred. No. 0.46;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         96 PRCGNPDVA 104


RESULT 9
MMP2_HUMAN
ID   MMP2_HUMAN     STANDARD;      PRT;   660 AA.
AC   P08253;
DT   01-AUG-1988 (Rel. 08, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A) (TBE-
DE   1).
GN   Name=MMP2; Synonyms=CLG4A;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE OF 19-660, AND PARTIAL PROTEIN SEQUENCE.
RX   MEDLINE=88198218; PubMed=2834383;
RA   Collier I.E., Wilhelm S.M., Eisen A.Z., Marmer B.L., Grant G.A.,
RA   Seltzer J.L., Kronberger A., He C., Bauer E.A., Goldberg G.I.;
RT   "H-ras oncogene-transformed human bronchial epithelial cells (TBE-1)
RT   secrete a single metalloprotease capable of degrading basement
RT   membrane collagen.";
RL   J. Biol. Chem. 263:6579-6587(1988).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=91236162; PubMed=1851724;
RA   Collier I.E., Bruns G.A.P., Goldberg G.I., Gerhard D.S.;
RT   "On the structure and chromosome location of the 72- and 92-kDa human
RT   type IV collagenase genes.";
RL   Genomics 9:429-434(1991).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=90293047; PubMed=2162831;
RA   Huhtala P., Chow L.T., Tryggvason K.;
RT   "Structure of the human type IV collagenase gene.";
RL   J. Biol. Chem. 265:11077-11082(1990).
RN   [4]
RP   NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANTS VAL-447 AND LEU-621.
RA   Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N.,
RA   Nguyen C.P., Nguyen D.A., Poel C.L., Chambers S.W., Schackwitz W.S.,
RA   Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.;
RT   "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department
RT   of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).";
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
RN   [5]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [6]
RP   NUCLEOTIDE SEQUENCE OF 1-51.
RX   MEDLINE=90228972; PubMed=2158484;
RA   Huhtala P., Eddy R.L., Fan Y.S., Byers M.G., Shows T.B.,
RA   Tryggvason K.;
RT   "Completion of the primary structure of the human type IV collagenase
RT   preproenzyme and assignment of the gene (CLG4) to the q21 region of
RT   chromosome 16.";
RL   Genomics 6:554-559(1990).
RN   [7]
RP   ENZYME REGULATION.
RX   PubMed=11179305; DOI=10.1128/IAI.69.3.1402-1408.2001;
RA   Gusman H., Travis J., Helmerhorst E.J., Potempa J., Troxler R.F.,
RA   Oppenheim F.G.;
RT   "Salivary histatin 5 is an inhibitor of both host and bacterial
RT   enzymes implicated in periodontal disease.";
RL   Infect. Immun. 69:1402-1408(2001).
RN   [8]
RP   PROCESSING OF KISS1.
RX   MEDLINE=22761370; PubMed=12879005; DOI=10.1038/sj.onc.1206542;
RA   Takino T., Koshikawa N., Miyamori H., Tanaka M., Sasaki T., Okada Y.,
RA   Seiki M., Sato H.;
RT   "Cleavage of metastasis suppressor gene product KiSS-1
RT   protein/metastin by matrix metalloproteinases.";
RL   Oncogene 22:4617-4626(2003).
RN   [9]
RP   X-RAY CRYSTALLOGRAPHY (2.15 ANGSTROMS) OF 443-660.
RX   MEDLINE=96069777; PubMed=7583664;
RA   Libson A.M., Gittis A.G., Collier I.E., Marmer B.L., Goldberg G.I.,
RA   Lattman E.E.;
RT   "Crystal structure of the haemopexin-like C-terminal domain of
RT   gelatinase A.";
RL   Nat. Struct. Biol. 2:938-942(1995).
RN   [10]
RP   X-RAY CRYSTALLOGRAPHY (2.6 ANGSTROMS) OF 458-660.
RX   MEDLINE=96140723; PubMed=8549817; DOI=10.1016/0014-5793(95)01435-7;
RA   Gohlke U., Gomis-Rueth F.-X., Crabbe T., Murphy G., Docherty A.J.,
RA   Bode W.;
RT   "The C-terminal (haemopexin-like) domain structure of human gelatinase
RT   A (MMP2): structural implications for its function.";
RL   FEBS Lett. 378:126-130(1996).
CC   -!- FUNCTION: In addition to gelatin and collagens, it cleaves KiSS1
CC       at a Gly-|-Leu bond.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit.
CC   -!- COFACTOR: Binds 2 zinc ions per subunit.
CC   -!- ENZYME REGULATION: Inhibited by histatin-3 1/24 (histatin-5).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ----------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ----------------------------------------------------------------------
DR   EMBL; J03210; AAA35701.1; -; mRNA.
```

```
DR   EMBL; M33789; AAA52027.1; -; Genomic_DNA.
DR   EMBL; M55593; AAA52028.1; -; Genomic_DNA.
DR   EMBL; M58552; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55582; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55583; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55584; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55585; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55586; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55587; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55588; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55589; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55590; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55591; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55592; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; AY738117; AAU10089.1; -; Genomic_DNA.
DR   EMBL; BC002576; AAH02576.1; -; mRNA.
DR   PIR; A28153; A28153.
DR   PDB; 1CK7; X-ray; A=30-660.
DR   PDB; 1CXW; NMR; A=278-336.
DR   PDB; 1EAK; X-ray; A/B/C/D=32-452.
DR   PDB; 1GEN; X-ray; @=443-660.
DR   PDB; 1GXD; X-ray; A/B=30-660.
DR   PDB; 1HOV; NMR; A=110-214.
DR   PDB; 1J7M; NMR; A=337-394.
DR   PDB; 1KS0; NMR; A=223-282.
DR   PDB; 1QIB; X-ray; A=115-216.
DR   PDB; 1RTG; X-ray; @=451-660.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSG00000087245; Homo sapiens.
DR   HGNC; HGNC:7166; MMP2.
DR   H-InvDB; HIX0013041; -.
DR   MIM; 120360; -.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0004228; F:gelatinase A activity; TAS.
DR   GO; GO:0008270; F:zinc ion binding; TAS.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   3D-structure; Calcium; Collagen degradation;
KW   Direct protein sequencing; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Polymorphism; Protease;
KW   Repeat; Signal; Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    660       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      466    660       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.

  Query Match             100.0%;  Score 54;  DB 1;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 10
Q5IY21_TUPGB
ID   Q5IY21_TUPGB PRELIMINARY;      PRT;   660 AA.
AC   Q5IY21;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   Matrix metalloproteinase 2.
OS   Tupaia glis belangeri (Common tree shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Scandentia; Tupaiidae; Tupaia.
OX   NCBI_TaxID=37347;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15621657; DOI=10.1080/10425170400012925;
RA   Kenning M.S., Gentle A., McBrien N.A.;
RT   "Expression and cDNA sequence of matrix metalloproteinase-2 (MMP-2) in
RT   a mammalian model of human disease processes: Tupaia belangeri.";
RL   DNA Seq. 15:332-337(2004).
DR   EMBL; AY600958; AAT44903.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 2.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   660 AA;  73871 MW;  FC7EB8481091C5ED CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 11
Q95JA4_PIG
ID   Q95JA4_PIG  PRELIMINARY;      PRT;   661 AA.
AC   Q95JA4;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Gelatinase A.
GN   Name=MMP-2;
OS   Sus scrofa (Pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
```

```
OC   Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Tooth enamel organ;
RX   MEDLINE=21480581; PubMed=11597028;
RA   Caron C., Xue J., Sun X., Simmer J.P., Bartlett J.D.;
RT   "Gelatinase A (MMP-2) in developing tooth tissues and amelogenin
RT   hydrolysis.";
RL   J. Dent. Res. 80:1660-1664(2001).
DR   EMBL; AF295805; AAK97133.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   661 AA;  73669 MW;  41CD448BD72D2CC2 CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        101 PRCGNPDVA 109


RESULT 12
Q9GLE5_BOVIN
ID   Q9GLE5_BOVIN PRELIMINARY;      PRT;   661 AA.
AC   Q9GLE5;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloprotease 2.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC   Pecora; Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Yan L., Zhang B., Tsang P., Fang J., Yu Y., Ingber D.E., Moses M.A.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF290428; AAG28169.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
KW   Metalloprotease; Protease.
SQ   SEQUENCE   661 AA;  73776 MW;  90545F7645E5F84D CRC64;

  Query Match             100.0%;  Score 54;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        101 PRCGNPDVA 109


RESULT 13
MMP2_MOUSE
ID   MMP2_MOUSE     STANDARD;      PRT;   662 AA.
AC   P33434;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=92218452; PubMed=1373140;
RA   Reponen P., Sahlberg C., Huhtala P., Hurskainen T., Thesleff I.,
RA   Tryggvason K.;
RT   "Molecular cloning of murine 72-kDa type IV collagenase and its
RT   expression during mouse development.";
RL   J. Biol. Chem. 267:7856-7862(1992).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   STRAIN=C57BL/6; TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
```

```
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   DEVELOPMENTAL STAGE.
RC   TISSUE=Embryo;
RX   PubMed=2744464;
RA   Brenner C.A., Adler R.R., Rappolee D.A., Pedersen R.A., Werb Z.;
RT   "Genes for extracellular-matrix-degrading metalloproteinases and their
RT   inhibitor, TIMP, are expressed during early mammalian development.";
RL   Genes Dev. 3:848-859(1989).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- DEVELOPMENTAL STAGE: Present in unfertilized eggs and at the
CC       zygote and cleavage stages. Levels increase at the blastocyst
CC       stage and with endoderm differentiation.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; M84324; AAA39338.1; -; mRNA.
DR   EMBL; BC070430; AAH70430.1; -; mRNA.
DR   PIR; A42496; A42496.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSMUSG00000031740; Mus musculus.
DR   MGI; MGI:97009; Mmp2.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    662       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      468    662       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.
FT   REGION      222    396       Collagen-binding.
FT   REGION      397    467       Collagenase-like 2.
FT   ACT_SITE    404    404       By similarity.
FT   METAL       134    134       Calcium 1 (By similarity).
FT   METAL       168    168       Calcium 2 (By similarity).
FT   METAL       178    178       Zinc 1 (By similarity).
FT   METAL       180    180       Zinc 1 (By similarity).
FT   METAL       185    185       Calcium 3 (By similarity).
FT   METAL       186    186       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       193    193       Zinc 1 (By similarity).
FT   METAL       200    200       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       202    202       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       204    204       Calcium 2 (By similarity).
FT   METAL       206    206       Zinc 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       209    209       Calcium 1 (By similarity).
FT   METAL       211    211       Calcium 3 (By similarity).
FT   METAL       403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL       407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL       413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL       478    478       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       523    523       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       571    571       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       620    620       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE        102    102       Cysteine switch (Potential).
FT   CARBOHYD    575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID    471    662       By similarity.
SQ   SEQUENCE   662 AA;  74102 MW;  C630A7DBDB272F02 CRC64;
```

Query Match 100.0%; Score 54; DB 1; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.47;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

```
RESULT 14
MMP2_RABIT
ID   MMP2_RABIT     STANDARD;      PRT;   662 AA.
AC   P50757;
DT   01-OCT-1996 (Rel. 34, Created)
DT   01-OCT-1996 (Rel. 34, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC   Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Japanese white; TISSUE=Articular joint;
RX   MEDLINE=96283805; PubMed=8679695; DOI=10.1016/0167-4781(96)00050-4;
RA   Matsumoto S., Katoh M., Watanabe T., Masuho Y.;
RT   "Molecular cloning of rabbit matrix metalloproteinase-2 and its broad
RT   expression at several tissues.";
RL   Biochim. Biophys. Acta 1307:137-139(1996).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
```

```
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; D63579; BAA09796.1; -; mRNA.
DR   PIR; S70365; S70365.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP      30    109       Activation peptide.
FT   CHAIN      110    662       72 kDa type IV collagenase.
FT   DOMAIN     228    276       Fibronectin type-II 1.
FT   DOMAIN     286    334       Fibronectin type-II 2.
FT   DOMAIN     344    392       Fibronectin type-II 3.
FT   DOMAIN     468    662       Hemopexin-like.
FT   REGION     110    221       Collagenase-like 1.
FT   REGION     222    396       Collagen-binding.
FT   REGION     397    467       Collagenase-like 2.
FT   ACT_SITE   404    404       By similarity.
FT   METAL      134    134       Calcium 1 (By similarity).
FT   METAL      168    168       Calcium 2 (By similarity).
FT   METAL      178    178       Zinc 1 (By similarity).
FT   METAL      180    180       Zinc 1 (By similarity).
FT   METAL      185    185       Calcium 3 (By similarity).
FT   METAL      186    186       Calcium 3 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      193    193       Zinc 1 (By similarity).
FT   METAL      200    200       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      202    202       Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      204    204       Calcium 2 (By similarity).
FT   METAL      206    206       Zinc 1 (By similarity).
FT   METAL      208    208       Calcium 3 (By similarity).
FT   METAL      209    209       Calcium 1 (By similarity).
FT   METAL      211    211       Calcium 3 (By similarity).
FT   METAL      403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL      407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL      413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL      478    478       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      523    523       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      571    571       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL      620    620       Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   SITE       102    102       Cysteine switch (Potential).
FT   CARBOHYD   575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID   471    662       By similarity.
SQ   SEQUENCE   662 AA;  73803 MW;  1CC246B270E440C8 CRC64;

  Query Match             100.0%;  Score 54;  DB 1;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 15
MMP2_RAT
ID   MMP2_RAT       STANDARD;      PRT;   662 AA.
AC   P33436; P97581;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=93249363; PubMed=7916617;
RA   Marti H.P., McNeil L., Davies M., Martin J., Lovett D.H.;
RT   "Homology cloning of rat 72 kDa type IV collagenase: cytokine and
RT   second-messenger inducibility in glomerular mesangial cells.";
RL   Biochem. J. 291:441-446(1993).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Wistar; TISSUE=Skin;
RA   Okada A., Basset P.;
RT   "The cloning of the cDNA encoding rat gelatinase A from a rat skin
RT   wound cDNA library.";
RL   Submitted (JUL-1996) to the EMBL/GenBank/DDBJ databases.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; X71466; CAA50583.1; -; mRNA.
DR   EMBL; U65656; AAB41692.1; -; mRNA.
DR   PIR; S34780; S34780.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   RGD; 621316; Mmp2.
DR   GO; GO:0004228; F:gelatinase A activity; IDA.
DR   GO; GO:0008237; F:metallopeptidase activity; TAS.
```

```
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    662       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      468    662       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.
FT   REGION      222    396       Collagen-binding.
FT   REGION      397    467       Collagenase-like 2.
FT   ACT_SITE    404    404       By similarity.
FT   METAL       134    134       Calcium 1 (By similarity).
FT   METAL       168    168       Calcium 2 (By similarity).
FT   METAL       178    178       Zinc 1 (By similarity).
FT   METAL       180    180       Zinc 1 (By similarity).
FT   METAL       185    185       Calcium 3 (By similarity).
FT   METAL       186    186       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       193    193       Zinc 1 (By similarity).
FT   METAL       200    200       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       202    202       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       204    204       Calcium 2 (By similarity).
FT   METAL       206    206       Zinc 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       209    209       Calcium 1 (By similarity).
FT   METAL       211    211       Calcium 3 (By similarity).
FT   METAL       403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL       407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL       413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL       478    478       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       523    523       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       571    571       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       620    620       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE        102    102       Cysteine switch (Potential).
FT   CARBOHYD    575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID    471    662       By similarity.
FT   CONFLICT     42     42       A -> S (in Ref. 2).
FT   CONFLICT    286    286       A -> G (in Ref. 2).
FT   CONFLICT    369    369       N -> S (in Ref. 2).
FT   CONFLICT    435    435       H -> N (in Ref. 2).
FT   CONFLICT    586    586       A -> S (in Ref. 2).
SQ   SEQUENCE   662 AA;  74182 MW;  7496B34B0A21884B CRC64;
```

```
  Query Match           100.0%;  Score 54;  DB 1;  Length 662;
  Best Local Similarity  100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 16
Q6GMM9_RAT
ID   Q6GMM9_RAT  PRELIMINARY;      PRT;   662 AA.
AC   Q6GMM9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2 protein.
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RG   NIH MGC Project;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC074013; AAH74013.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
```

```
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   662 AA;  74149 MW;  C56BD787473FC03E CRC64;

  Query Match           100.0%;  Score 54;  DB 2;  Length 662;
  Best Local Similarity  100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 17
MMP2_CHICK
ID   MMP2_CHICK     STANDARD;      PRT;   663 AA.
AC   Q90611;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Embryo;
RX   MEDLINE=94280397; PubMed=8010954;
RA   Aimes R.T., French D.L., Quigley J.P.;
RT   "Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from
RT   chicken embryo fibroblasts using gene family PCR: expression of the
RT   gelatinase increases upon malignant transformation.";
RL   Biochem. J. 300:729-736(1994).
RN   [2]
RP   PROTEIN SEQUENCE OF 27-41 AND 107-122.
RX   MEDLINE=91161603; PubMed=1848240;
RA   Chen J.-M., Aimes R.T., Ward G.R., Youngleib G.L., Quigley J.P.;
RT   "Isolation and characterization of a 70-kDa metalloprotease
RT   (gelatinase) that is elevated in Rous sarcoma virus-transformed
RT   chicken embryo fibroblasts.";
RL   J. Biol. Chem. 266:5113-5121(1991).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; U07775; AAA19596.1; -; mRNA.
DR   PIR; S46492; S46492.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSGALG00000003580; Gallus gallus.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Direct protein sequencing;
KW   Extracellular matrix; Hydrolase; Metal-binding; Metalloprotease;
KW   Protease; Repeat; Signal; Zinc; Zymogen.
FT   SIGNAL        1     26
FT   PROPEP       27    106       Activation peptide.
FT   CHAIN       107    663       72 kDa type IV collagenase.
FT   DOMAIN      225    273       Fibronectin type-II 1.
FT   DOMAIN      283    331       Fibronectin type-II 2.
FT   DOMAIN      341    389       Fibronectin type-II 3.
FT   DOMAIN      469    663       Hemopexin-like.
FT   REGION      107    218       Collagenase-like 1.
FT   REGION      219    393       Collagen-binding.
FT   REGION      394    468       Collagenase-like 2.
FT   ACT_SITE    401    401       By similarity.
FT   METAL       131    131       Calcium 1 (By similarity).
FT   METAL       165    165       Calcium 2 (By similarity).
FT   METAL       175    175       Zinc 1 (By similarity).
FT   METAL       177    177       Zinc 1 (By similarity).
FT   METAL       182    182       Calcium 3 (By similarity).
FT   METAL       183    183       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       190    190       Zinc 1 (By similarity).
FT   METAL       197    197       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       199    199       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       201    201       Calcium 2 (By similarity).
FT   METAL       203    203       Zinc 1 (By similarity).
FT   METAL       205    205       Calcium 3 (By similarity).
FT   METAL       206    206       Calcium 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       400    400       Zinc 2 (catalytic) (By similarity).
FT   METAL       404    404       Zinc 2 (catalytic) (By similarity).
FT   METAL       410    410       Zinc 2 (catalytic) (By similarity).
FT   METAL       479    479       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       524    524       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       572    572       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       621    621       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE         99     99       Cysteine switch (Potential).
FT   DISULFID    472    663       By similarity.
FT   CONFLICT     40     40       P -> Q (in Ref. 2).
FT   CONFLICT    116    116       W -> T (in Ref. 2).
FT   CONFLICT    122    122       T -> I (in Ref. 2).
SQ   SEQUENCE   663 AA;  74941 MW;  8D6FDA4E67C3EBCA CRC64;

  Query Match           100.0%;  Score 54;  DB 1;  Length 663;
  Best Local Similarity  100.0%;  Pred. No. 0.47;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
```

Db 97 PRCGNPDVA 105

Search completed: February 21, 2006, 18:42:03
Job time : 90.2368 secs

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 17:57:40 ; Search time 90.9474 Seconds
(without alignments)
43.480 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 70

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : A_Geneseq_21:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	9	6	ABP97134	Abp97134 Human mat
2	54	100.0	9	6	ABG76320	Abg76320 Human mat
3	54	100.0	9	8	ADQ17095	Adq17095 Human mat
4	54	100.0	9	9	ADV68476	Adv68476 Human mat
5	54	100.0	11	8	ADJ37569	Adj37569 MMP-2 pro
6	54	100.0	14	2	AAY07331	Aay07331 Matrix me
7	54	100.0	14	4	AAU09136	Aau09136 Matrix me
8	54	100.0	14	6	ABG76327	Abg76327 Human MMP
9	54	100.0	14	7	ADM48669	Adm48669 Human mat
10	54	100.0	14	8	ADQ17102	Adq17102 Human mat
11	54	100.0	17	6	ABG76328	Abg76328 Human MMP
12	54	100.0	17	8	ADQ17103	Adq17103 Human mat
13	54	100.0	19	6	ABP97133	Abp97133 Human mat
14	54	100.0	19	6	ABG76319	Abg76319 Human mat
15	54	100.0	19	8	ADQ17094	Adq17094 Human mat
16	54	100.0	19	9	ADV68475	Adv68475 Human mat
17	54	100.0	23	2	AAY07359	Aay07359 Matrix me
18	54	100.0	43	6	ABP97137	Abp97137 Human mat
19	54	100.0	43	6	ABG76323	Abg76323 Partial s
20	54	100.0	43	8	ADQ17098	Adq17098 Human mat
21	54	100.0	43	9	ADV68479	Adv68479 Human mat
22	54	100.0	44	6	ABP97124	Abp97124 Human mat
23	54	100.0	44	6	ABG76310	Abg76310 Human mat
24	54	100.0	44	8	ADQ17085	Adq17085 Human mat
25	54	100.0	44	9	ADV68466	Adv68466 Human mat
26	54	100.0	75	4	AAM30829	Aam30829 Peptide #
27	54	100.0	75	4	ABB22666	Abb22666 Protein #
28	54	100.0	75	5	ABG40146	Abg40146 Human pep
29	54	100.0	80	2	AAY07349	Aay07349 Fragment
30	54	100.0	80	5	AAG78385	Aag78385 Rat/mouse
31	54	100.0	85	2	AAY07338	Aay07338 Fragment
32	54	100.0	92	5	AAG78386	Aag78386 Recombina
33	54	100.0	194	9	AEA20074	Aea20074 Novel hum
34	54	100.0	445	7	ADF59546	Adf59546 Human pol
35	54	100.0	462	9	AEA90447	Aea90447 Human lun
36	54	100.0	468	4	ABG24001	Abg24001 Novel hum
37	54	100.0	623	8	ABM84057	Abm84057 Human dia
38	54	100.0	631	1	AAP96143	Aap96143 Sequence
39	54	100.0	631	1	AAP91139	Aap91139 Human typ
40	54	100.0	631	2	AAR07969	Aar07969 Complete
41	54	100.0	631	2	AAY07350	Aay07350 Human typ
42	54	100.0	631	2	AAW41226	Aaw41226 Human mat
43	54	100.0	631	7	ADM48668	Adm48668 Human mat
44	54	100.0	631	8	ADT05996	Adt05996 Human mat
45	54	100.0	633	8	ADT05997	Adt05997 Mouse mat
46	54	100.0	644	4	AAB20490	Aab20490 Human mat
47	54	100.0	660	2	AAR06420	Aar06420 Type IV c
48	54	100.0	660	4	AAB84607	Aab84607 Amino aci
49	54	100.0	660	4	AAE10431	Aae10431 Human mat
50	54	100.0	660	5	ABB79413	Abb79413 Human mat
51	54	100.0	660	5	ABB90738	Abb90738 Human Tum
52	54	100.0	660	5	AAU84348	Aau84348 Protein M
53	54	100.0	660	6	ABU54445	Abu54445 Human tum
54	54	100.0	660	6	ABP97136	Abp97136 Human mat
55	54	100.0	660	6	AAO16608	Aao16608 Human mat
56	54	100.0	660	6	ABG76322	Abg76322 Human mat
57	54	100.0	660	7	ADD18578	Add18578 Human dis
58	54	100.0	660	7	ADP65244	Adp65244 Human mat
59	54	100.0	660	8	ADN07697	Adn07697 Human mat
60	54	100.0	660	8	ADQ17097	Adq17097 Human mat
61	54	100.0	660	9	ADV90301	Adv90301 Protease-
62	54	100.0	660	9	ADV68478	Adv68478 Human mat
63	54	100.0	662	7	ADE62857	Ade62857 Rat Prote
64	54	100.0	662	7	ADD46270	Add46270 Rat Prote
65	54	100.0	663	2	AAW41111	Aaw41111 Chicken m
66	54	100.0	663	8	ADT05976	Adt05976 Chicken m
67	54	100.0	663	8	ADT05995	Adt05995 Chicken m
68	54	100.0	708	7	ADF60554	Adf60554 Human con
69	54	100.0	708	9	AEA20970	Aea20970 Novel hum
70	54	100.0	1330	4	ABG23999	Abg23999 Novel hum

ALIGNMENTS

RESULT 1
ABP97134
ID ABP97134 standard; peptide; 9 AA.
XX
AC ABP97134;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:12.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX

PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 45; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 9 AA;

Query Match 100.0%; Score 54; DB 6; Length 9;
Best Local Similarity 100.0%; Pred. No. 2e+06;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 2
ABG76320
ID ABG76320 standard; peptide; 9 AA.
XX
AC ABG76320;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #12.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 44; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 9 AA;

Query Match 100.0%; Score 54; DB 6; Length 9;
Best Local Similarity 100.0%; Pred. No. 2e+06;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 3
ADQ17095
ID ADQ17095 standard; peptide; 9 AA.
XX
AC ADQ17095;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #3.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Example 1; SEQ ID NO 12; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing

```
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC   the exemplification of the invention.
XX
SQ   Sequence 9 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 2e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 4
ADV68476
ID   ADV68476 standard; peptide; 9 AA.
XX
AC   ADV68476;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 cleavage region polypeptide SeqID12.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW   metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW   metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW   metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW   metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW   metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW   metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW   metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS   Homo sapiens.
XX
PN   US2004259802-A1.
XX
PD   23-DEC-2004.
XX
PF   20-JUN-2003; 2003US-00601059.
XX
PR   20-JUN-2003; 2003US-00601059.
XX
PA   (YANG/) YANG S.
PA   (QUIR/) QUIRK S.
XX
PI   Yang S,  Quirk S;
XX
DR   WPI; 2005-047374/05.
XX
PT   A composition for decreasing and inhibiting the growth of chondrosarcoma
PT   cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT   matrix metalloproteinase inhibitor.
XX
PS   Claim 16; SEQ ID NO 12; 50pp; English.
XX
CC   This invention relates to a novel composition for inhibiting growth of
CC   chondrosarcoma cells comprising an amount of a peptide and a
CC   pharmaceutical carrier. The invention may be useful for the production of
CC   compounds with a cytostatic activity acting as metalloprotease 1
CC   inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC   metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC   metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC   metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC   metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC   metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC   metalloprotease inhibitors. The composition is useful for decreasing and
CC   inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC   growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC   treating chondrosarcomas and bone cancers. The present sequence is that
CC   of a peptide derived from a human matrix metalloproteinase which may be
CC   used during the development of a composition of the invention.
XX
SQ   Sequence 9 AA;

  Query Match             100.0%;  Score 54;  DB 9;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 2e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 5
ADJ37569
ID   ADJ37569 standard; peptide; 11 AA.
XX
AC   ADJ37569;
XX
DT   22-APR-2004  (first entry)
XX
DE   MMP-2 prodomain peptide for use in wound healing.
XX
KW   Matrix metalloproteinase; MMP prodomain peptide; reepithelialisation;
KW   provisional matrix formation; angiogenesis; wound healing; burn;
KW   diabetes; vulnerary; matrix metalloproteinase-2; MMP-2.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "N-terminal acetyl"
FT   Modified-site   11
FT                   /note= "C-terminal amide"
XX
PN   WO2004006864-A2.
XX
PD   22-JAN-2004.
XX
PF   16-JUL-2003; 2003WO-US022453.
XX
PR   17-JUL-2002; 2002US-0396366P.
PR   15-JUL-2003; 2003US-00619809.
XX
PA   (UNMI ) UNIV MICHIGAN.
XX
PI   Livant DL;
XX
DR   WPI; 2004-143032/14.
XX
PT   Use of matrix metalloproteinase prodomain peptides for the treatment of
PT   wound e.g. chronic wound in the patients with diabetes or burns.
XX
PS   Claim 10; Page 25; 35pp; English.
XX
CC   The invention relates to a method for the treatment of a wound comprising
CC   the administration of a matrix metalloproteinase (MMP) prodomain peptide
CC   (). The invention also encompasses a kit containing the MMP prodomain
CC   peptide and instructions for its use. The MMP prodomain peptides promote
CC   reepithelialisation, provisional matrix formation and angiogenesis, and
CC   may be derived from MMP-1, MMP-7, MMP-2 or MMP-9. They may be used for
CC   treating wounds, particularly chronic wounds in burns patients or those
CC   with diabetes. The present sequence represents a specifically claimed MMP
CC   -2 prodomain peptide of the invention.
XX
SQ   Sequence 11 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 11;
  Best Local Similarity   100.0%;  Pred. No. 0.039;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 6
AAY07331
ID   AAY07331 standard; peptide; 14 AA.
XX
AC   AAY07331;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Matrix metalloprotease inhibitor peptide #2.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Synthetic.
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Claim 3; Page 41; 61pp; English.
XX
CC   This peptide represents a matrix metalloprotease (MMP) inhibitor peptide
CC   of the formula: aa1-aa2-aa3-aa4-C where aa1 and aa4 is R or K; aa2 is K,
CC   Q or N; aa3 is P, A, G, L, I or V; and C is a cysteine having a free
CC   sulphydryl group. The peptides can be used to treat tissue damage caused
CC   by activated MMPs, e.g. for treating inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarcoidosis. Antibodies to the peptides
CC   can be used to detect the MMPs and can distinguish activated from latent
CC   enzyme. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC   2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 14 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.05;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 7
AAU09136
ID   AAU09136 standard; peptide; 14 AA.
XX
AC   AAU09136;
XX
DT   19-DEC-2001  (first entry)
XX
DE   Matrix metalloproteinase (MMP) inhibitory peptide #4.
XX
KW   Matrix metalloproteinase; MMP; proenzyme; ophthalmological;
KW   retinal neovascularisation; macular degeneration; diabetic retinopathy;
KW   retinopathy of prematurity; ROP; retinitis pigmentosa; RP;
KW   macular oedema; glaucoma; posterior uveitis; endophthalmitis;
KW   ocular insult; arthritis; rosacea.
XX
OS   Synthetic.
XX
PN   WO200168053-A2.
XX
PD   20-SEP-2001.
XX
PF   07-MAR-2001; 2001WO-US007171.
XX
PR   10-MAR-2000; 2000US-00523102.
PR   28-AUG-2000; 2000US-00648446.
XX
PA   (INSI-) INSITE VISION INC.
XX
PI   Si EC,  Bowman LM,  Rowe-Rendleman C,  Roy S;
XX
DR   WPI; 2001-616269/71.
XX
PT   Treating and preventing ophthalmological disorders e.g. retinal
PT   neovascularization comprises administering composition comprising
PT   therapeutic agent e.g. hydroxamic acid, and optionally polymeric
PT   suspension agent.
XX
PS   Claim 21; Page 17; 52pp; English.
XX
CC   The invention describes a novel method of treating and preventing
CC   ophthalmological disorders comprising topically administering to the eye
CC   a composition delivering a therapeutic agent to the posterior segment of
CC   the eye. The composition optionally includes a polymeric suspension
CC   agent. The test is used for treating ophthalmic disorders, preferably
CC   posterior segment ophthalmic disorders, particularly retinal
CC   neovascularisation, macular oedema, ocular insult, ocular manifestation
CC   of systemic disease e.g. viral infection, arthritis and rosacea and
CC   atrophic disorders of the posterior segment; macular degeneration,
CC   diabetic retinopathy, retinopathy of prematurity (ROP), glaucoma,
CC   retinitis pigmentosa (RP), posterior uveitis and endophthalmitis. The
CC   composition may be self administered without using anaesthetics to
CC   deliver therapeutically effective amounts of active agent. This peptide
CC   sequence is a Matrix metalloproteinase (MMP) inhibitory peptide #4, a
CC   therapeutic peptide based on the conserved region of MMP pro-collagenase,
CC   (see AAU09130), described in the method of the invention
XX
SQ   Sequence 14 AA;

  Query Match             100.0%;  Score 54;  DB 4;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.05;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 8
ABG76327
ID   ABG76327 standard; peptide; 14 AA.
XX
AC   ABG76327;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Human MMP-2 peptide #1 tested in NHDF migration assay.
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
```

KW skin tone; wrinkle; anti-aging; vulnerary;
KW normal human dermal fibroblast migration assay; NHDF.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Example 5; Page 54; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. The present sequence represents a peptide tested in a normal
CC human dermal fibroblast (NHDF) migration assay in the examples of the
CC present invention
XX
SQ Sequence 14 AA;

```
  Query Match             100.0%;  Score 54;  DB 6;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.05;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13
```

RESULT 9
ADM48669
ID ADM48669 standard; peptide; 14 AA.
XX
AC ADM48669;
XX
DT 03-JUN-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP-2) peptide #8.
XX
KW Cancer; metastasis; matrix metalloproteinase-2; MMP-2; vaccine;
KW immune response; gene therapy; cytostatic; enzyme; human.
XX
OS Homo sapiens.
XX
PN US2003139345-A1.
XX
PD 24-JUL-2003.
XX
PF 23-JAN-2003; 2003US-00350258.
XX
PR 23-JAN-2002; 2002US-0351317P.
XX
PA (NETK/) NETKE S.
PA (NIED/) NIEDZWIECKI A.
PA (RATH/) RATH M.
XX
PI Netke S, Niedzwiecki A, Rath M;
XX
DR WPI; 2003-897356/82.
XX
PT New synthetic oligopeptide, useful for blocking or treating cancer
PT invasion and metastases in a human patient, particularly as a vaccine for
PT treating or preventing diagnosing brain cancer, lung cancer, skin cancer
PT or breast cancer.
XX
PS Example 1; Fig 2; 11pp; English.
XX
CC The present invention relates to novel synthetic oligopeptides effective
CC in blocking cancer invasion and metastasis. The invention relates to
CC matrix metalloproteinase-2 (MMP-2) peptides. The synthetic oligopeptides
CC are useful as pharmaceutical compositions for blocking or treating cancer
CC invasion and metastases in a human patient. In particular, they are
CC useful for treating brain cancer, lung cancer, skin cancer or breast
CC cancer. The oligopeptides are also useful as vaccines for preventing
CC these cancers, enhancing immune response or raising antibodies for assays
CC used to diagnose diseases involving matrix metalloproteinases or clinical
CC monitoring of the progression or regression of disease. They are also
CC useful in gene therapy. The present sequence is a human MMP-2 peptide.
XX
SQ Sequence 14 AA;

```
  Query Match             100.0%;  Score 54;  DB 7;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.05;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13
```

RESULT 10
ADQ17102
ID ADQ17102 standard; peptide; 14 AA.
XX
AC ADQ17102;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) 14-mer peptide.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Example 1; SEQ ID NO 19; 60pp; English.

```
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase (MMP) peptide. This sequence is used in the
CC   exemplification of the invention.
XX
SQ   Sequence 14 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.05;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 11
ABG76328
ID   ABG76328 standard; peptide; 17 AA.
XX
AC   ABG76328;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Human MMP-2 peptide #2 tested in NHDF migration assay.
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
KW   skin tone; wrinkle; anti-aging; vulnerary;
KW   normal human dermal fibroblast migration assay; NHDF.
XX
OS   Homo sapiens.
XX
PN   WO2003016520-A1.
XX
PD   27-FEB-2003.
XX
PF   15-AUG-2002; 2002WO-US026198.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Malik S,  Villanueva JM;
XX
DR   WPI; 2003-289980/28.
XX
PT   Novel peptide inhibitor of proteinase activity of matrix
PT   metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT   stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS   Example 5; Page 54; 120pp; English.
XX
CC   The present invention relates to peptide inhibitors of metalloproteinases
CC   (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC   peptide sequences related to the cleavage regions of the proenzyme forms
CC   of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC   proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC   development, treating wounds, preventing scarring, improving skin tone,
CC   reducing wrinkling and for simulating the development of smooth, healthy
CC   skin. The peptide inhibitors are useful as anti-aging and wound healing
CC   compounds. The present sequence represents a peptide tested in a normal
CC   human dermal fibroblast (NHDF) migration assay in the examples of the
CC   present invention
XX
SQ   Sequence 17 AA;

  Query Match             100.0%;  Score 54;  DB 6;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 0.061;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          8 PRCGNPDVA 16


RESULT 12
ADQ17103
ID   ADQ17103 standard; peptide; 17 AA.
XX
AC   ADQ17103;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Human matrix metalloproteinase-9 (MMP9) 17-mer peptide.
XX
KW   Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW   human; matrix metalloproteinase; MMP.
XX
OS   Homo sapiens.
XX
PN   US2004127421-A1.
XX
PD   01-JUL-2004.
XX
PF   30-DEC-2002; 2002US-00335207.
XX
PR   30-DEC-2002; 2002US-00335207.
XX
PA   (MALI/) MALIK S.
PA   (QUIR/) QUIRK S.
XX
PI   Malik S,  Quirk S;
XX
DR   WPI; 2004-506456/48.
XX
PT   Composition used for preventing and treating wrinkles and treating wounds
PT   comprises peptide having sequence related to matrix metalloproteinase
PT   proenzyme.
XX
PS   Example 1; SEQ ID NO 20; 60pp; English.
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase (MMP) peptide. This sequence is used in the
CC   exemplification of the invention.
XX
SQ   Sequence 17 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 0.061;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          8 PRCGNPDVA 16


RESULT 13
ABP97133
ID   ABP97133 standard; peptide; 19 AA.
XX
```

AC ABP97133;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:11.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 45; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 54; DB 6; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 14
ABG76319
ID ABG76319 standard; peptide; 19 AA.
XX
AC ABG76319;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #11.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 44; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 54; DB 6; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 15
ADQ17094
ID ADQ17094 standard; peptide; 19 AA.
XX
AC ADQ17094;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #2.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX

PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Claim 11; SEQ ID NO 11; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 54; DB 8; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 16
ADV68475
ID ADV68475 standard; peptide; 19 AA.
XX
AC ADV68475;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 cleavage region polypeptide SeqID11.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Claim 16; SEQ ID NO 11; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 54; DB 9; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 17
AAY07359
ID AAY07359 standard; peptide; 23 AA.
XX
AC AAY07359;
XX
DT 25-MAR-2003 (revised)
DT 16-JUL-1999 (first entry)
XX
DE Matrix metalloprotease inhibitor peptide #23.
XX
KW Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW metastasis; sarcoidosis.
XX
OS Synthetic.
XX
PN WO9010228-A.
XX
PD 07-SEP-1990.
XX
PF 01-MAR-1989; 89US-00317407.
XX
PR 01-MAR-1989; 89US-00317407.
PR 26-FEB-1990; 90US-00488460.
XX
PA (USDC) US SEC OF COMMERCE.
PA (USSH) NAT INST OF HEALTH.
XX
PI Liotta LA, Stetlerste W, Krutzsh H;
XX
DR WPI; 1990-290458/38.
XX
PT Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT tissue damage caused by activated enzyme.
XX
PS Example 1; Page 15; 61pp; English.
XX
CC This peptide represents a matrix metalloprotease (MMP) inhibitor peptide
CC of the invention. The peptides can be used to treat tissue damage caused

```
CC   by activated MMPs, e.g. for treating inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarcoidosis. Antibodies to the peptides
CC   can be used to detect the MMPs and can distinguish activated from latent
CC   enzyme. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC   2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 23 AA;

  Query Match            100.0%;  Score 54;  DB 2;  Length 23;
  Best Local Similarity  100.0%;  Pred. No. 0.083;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 18
ABP97137
ID   ABP97137 standard; peptide; 43 AA.
XX
AC   ABP97137;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 peptide SEQ ID NO:15.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW   macular degeneration; diabetic retinopathy; cleavage region.
XX
OS   Homo sapiens.
XX
PN   WO2003018748-A2.
XX
PD   06-MAR-2003.
XX
PF   15-AUG-2002; 2002WO-US026319.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Weart IF;
XX
DR   WPI; 2003-381408/36.
XX
PT   Anti-angiogenic composition comprising peptide inhibitor of matrix
PT   metalloproteinase, useful for decreasing the expression of vascular
PT   endothelial growth factor and treating cancers and tissue injuries.
XX
PS   Disclosure; Page 26; 103pp; English.
XX
CC   The present invention describes an anti-angiogenic composition (I) for
CC   inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC   comprises an effective amount of a peptide inhibitor of matrix
CC   metalloproteinase (MMP), where the peptide can inhibit the expression of
CC   VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC   antidiabetic, ophthalmological and dermatological activities. (I) can be
CC   used for inhibiting expression of VEGF, and so can be used for inhibiting
CC   growth of tumours and diminishing tumours size. The tumour can be
CC   metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC   (I) is also useful for treating injuries including wounds, surgical
CC   incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC   for treating disorders characterised by excessive angiogenesis e.g.
CC   macular degeneration and diabetic retinopathy. The present sequence
CC   represents a human MMP peptide, which is used in the exemplification of
CC   the present invention
XX
SQ   Sequence 43 AA;

  Query Match            100.0%;  Score 54;  DB 6;  Length 43;
  Best Local Similarity  100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 19
ABG76323
ID   ABG76323 standard; protein; 43 AA.
XX
AC   ABG76323;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Partial sequence from human matrix metalloproteinase-2 (MMP-2).
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
KW   skin tone; wrinkle; anti-aging; vulnerary.
XX
OS   Homo sapiens.
XX
PN   WO2003016520-A1.
XX
PD   27-FEB-2003.
XX
PF   15-AUG-2002; 2002WO-US026198.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Malik S,  Villanueva JM;
XX
DR   WPI; 2003-289980/28.
XX
PT   Novel peptide inhibitor of proteinase activity of matrix
PT   metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT   stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS   Claim 1; Page 27; 120pp; English.
XX
CC   The present invention relates to peptide inhibitors of metalloproteinases
CC   (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC   peptide sequences related to the cleavage regions of the proenzyme forms
CC   of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC   proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC   development, treating wounds, preventing scarring, improving skin tone,
CC   reducing wrinkling and for simulating the development of smooth, healthy
CC   skin. The peptide inhibitors are useful as anti-aging and wound healing
CC   compounds. The present sequence represents a partial sequence of human
CC   MMP-2
XX
SQ   Sequence 43 AA;

  Query Match            100.0%;  Score 54;  DB 6;  Length 43;
  Best Local Similarity  100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32
```

```
RESULT 20
ADQ17098
ID   ADQ17098 standard; peptide; 43 AA.
XX
AC   ADQ17098;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP2) wound site peptide.
XX
KW   Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW   human; matrix metalloproteinase; MMP.
XX
OS   Homo sapiens.
XX
PN   US2004127421-A1.
XX
PD   01-JUL-2004.
XX
PF   30-DEC-2002; 2002US-00335207.
XX
PR   30-DEC-2002; 2002US-00335207.
XX
PA   (MALI/) MALIK S.
PA   (QUIR/) QUIRK S.
XX
PI   Malik S,  Quirk S;
XX
DR   WPI; 2004-506456/48.
XX
PT   Composition used for preventing and treating wrinkles and treating wounds
PT   comprises peptide having sequence related to matrix metalloproteinase
PT   proenzyme.
XX
PS   Disclosure; SEQ ID NO 15; 60pp; English.
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase (MMP) wound site peptide. This sequence is used in the
CC   exemplification of the invention.
XX
SQ   Sequence 43 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 21
ADV68479
ID   ADV68479 standard; protein; 43 AA.
XX
AC   ADV68479;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 polypeptide SeqID15.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW   metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW   metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW   metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW   metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW   metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW   metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW   metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS   Homo sapiens.
XX
PN   US2004259802-A1.
XX
PD   23-DEC-2004.
XX
PF   20-JUN-2003; 2003US-00601059.
XX
PR   20-JUN-2003; 2003US-00601059.
XX
PA   (YANG/) YANG S.
PA   (QUIR/) QUIRK S.
XX
PI   Yang S,  Quirk S;
XX
DR   WPI; 2005-047374/05.
XX
PT   A composition for decreasing and inhibiting the growth of chondrosarcoma
PT   cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT   matrix metalloproteinase inhibitor.
XX
PS   Disclosure; SEQ ID NO 15; 50pp; English.
XX
CC   This invention relates to a novel composition for inhibiting growth of
CC   chondrosarcoma cells comprising an amount of a peptide and a
CC   pharmaceutical carrier. The invention may be useful for the production of
CC   compounds with a cytostatic activity acting as metalloprotease 1
CC   inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC   metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC   metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC   metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC   metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC   metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC   metalloprotease inhibitors. The composition is useful for decreasing and
CC   inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC   growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC   treating chondrosarcomas and bone cancers. The present sequence is that
CC   of a peptide derived from a human matrix metalloproteinase which may be
CC   used during the development of a composition of the invention.
XX
SQ   Sequence 43 AA;

  Query Match             100.0%;  Score 54;  DB 9;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 22
ABP97124
ID   ABP97124 standard; peptide; 44 AA.
XX
AC   ABP97124;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:2.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW   macular degeneration; diabetic retinopathy; cleavage region.
```

XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 15; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 44 AA;

```
  Query Match             100.0%;  Score 54;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32
```

RESULT 23
ABG76310
ID ABG76310 standard; protein; 44 AA.
XX
AC ABG76310;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #2.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 16; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 44 AA;

```
  Query Match             100.0%;  Score 54;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.16;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32
```

RESULT 24
ADQ17085
ID ADQ17085 standard; peptide; 44 AA.
XX
AC ADQ17085;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #1.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX

PS Example 1; SEQ ID NO 2; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 54; DB 8; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.16;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 25
ADV68466
ID ADV68466 standard; protein; 44 AA.
XX
AC ADV68466;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 cleavage region polypeptide SeqID2.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Claim 16; SEQ ID NO 2; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 54; DB 9; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.16;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 26
AAM30829
ID AAM30829 standard; protein; 75 AA.
XX
AC AAM30829;
XX
DT 17-OCT-2001 (first entry)
XX
DE Peptide #4866 encoded by probe for measuring placental gene expression.
XX
KW Probe; microarray; human; placenta; antenatal diagnosis;
KW genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200157272-A2.
XX
PD 09-AUG-2001.
XX
PF 30-JAN-2001; 2001WO-US000663.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2001-488897/53.
XX
PT Human genome-derived single exon nucleic acid probes useful for analyzing
PT gene expression in human placenta.
XX
PS Claim 27; SEQ ID NO 31098; 654pp; English.
XX
CC The present invention relates to single exon nucleic acid probes (SENP:
CC see AAI31315-AAI57546). The present sequence is a peptide encoded by one
CC such probe. The probes are useful for producing a microarray for
CC predicting, measuring and displaying gene expression in samples derived
CC from human placenta. The probes are useful for antenatal diagnosis of
CC human genetic disorders
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 54; DB 4; Length 75;
Best Local Similarity 100.0%; Pred. No. 0.27;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db         49 PRCGNPDVA 57


RESULT 27
ABB22666
ID   ABB22666 standard; protein; 75 AA.
XX
AC   ABB22666;
XX
DT   23-JAN-2002  (first entry)
XX
DE   Protein #4665 encoded by probe for measuring heart cell gene expression.
XX
KW   Human; gene expression; heart; microarray; vascular system;
KW   cardiovascular disease; hypertension; cardiac arrhythmia;
KW   congenital heart disease.
XX
OS   Homo sapiens.
XX
PN   WO200157274-A2.
XX
PD   09-AUG-2001.
XX
PF   30-JAN-2001; 2001WO-US000666.
XX
PR   04-FEB-2000; 2000US-0180312P.
PR   26-MAY-2000; 2000US-0207456P.
PR   30-JUN-2000; 2000US-00608408.
PR   03-AUG-2000; 2000US-00632366.
PR   21-SEP-2000; 2000US-0234687P.
PR   27-SEP-2000; 2000US-0236359P.
PR   04-OCT-2000; 2000GB-00024263.
XX
PA   (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI   Penn SG,  Hanzel DK,  Chen W,  Rank DR;
XX
DR   WPI; 2001-488899/53.
XX
PT   Single exon nucleic acid probes for analyzing gene expression in human
PT   hearts.
XX
PS   Claim 15; SEQ ID NO 24436; 530pp; English.
XX
CC   The present invention relates to single exon nucleic acid probes for
CC   measuring human gene expression in a sample derived from human heart (see
CC   ABA21535-ABA41305). The present sequence is a protein encoded by one such
CC   probe. The probes may be used for predicting, measuring and displaying
CC   gene expression in samples derived from the human heart via microarrays.
CC   By measuring gene expression, the probes are useful for predicting,
CC   diagnosing, grading, staging, monitoring and prognosing diseases of the
CC   human heart and vascular system e.g. cardiovascular disease,
CC   hypertension, cardiac arrhythmias and congenital heart disease. Note: The
CC   sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 75 AA;

  Query Match             100.0%;  Score 54;  DB 4;  Length 75;
  Best Local Similarity   100.0%;  Pred. No. 0.27;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         49 PRCGNPDVA 57


RESULT 28
ABG40146
ID   ABG40146 standard; peptide; 75 AA.
XX
AC   ABG40146;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human peptide encoded by genome-derived single exon probe SEQ ID 29811.
XX
KW   Human; single exon probe; asthma; lung cancer; COPD; ILD;
KW   chronic obstructive pulmonary disease; interstitial lung disease;
KW   familial idiopathic pulmonary fibrosis; neurofibromatosis;
KW   tuberous sclerosis; Gaucher's disease; Niemann-Pick disease;
KW   Hermansky-Pudlak syndrome; sarcoidosis; pulmonary haemosiderosis;
KW   pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome;
KW   pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia;
KW   primary ciliary dyskinesis; pulmonary hypertension;
KW   hyaline membrane disease.
XX
OS   Homo sapiens.
XX
PN   WO200186003-A2.
XX
PD   15-NOV-2001.
XX
PF   30-JAN-2001; 2001WO-US000665.
XX
PR   04-FEB-2000; 2000US-0180312P.
PR   26-MAY-2000; 2000US-0207456P.
PR   30-JUN-2000; 2000US-00608408.
PR   03-AUG-2000; 2000US-00632366.
PR   21-SEP-2000; 2000US-0234687P.
PR   27-SEP-2000; 2000US-0236359P.
PR   04-OCT-2000; 2000GB-00024263.
XX
PA   (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI   Penn SG,  Hanzel DK,  Chen W,  Rank DR;
XX
DR   WPI; 2002-114183/15.
XX
PT   Spatially-addressable set of single exon nucleic acid probes, used to
PT   measure gene expression in human lung samples.
XX
PS   Claim 27; SEQ ID NO 29811; 634pp; English.
XX
CC   The invention relates to a spatially-addressable set of single exon
CC   nucleic acid probes for measuring gene expression in a sample derived
CC   from human lung comprising single exon nucleic acid probes having one of
CC   12614 nucleic acid sequences mentioned in the specification, or their
CC   complements or the 12387 open reading frames derived from the 12614
CC   probes. Also included are a microarray comprising the novel set of probes
CC   ; the novel set of probes which hybridise at high stringency to a nucleic
CC   acid expressed in the human lung; measuring gene expression in a sample
CC   derived from human lung, comprising (a) contacting the array with a
CC   collection of detectably labeled nucleic acids derived from human lung
CC   mRNA, and (b) measuring the label detectably bound to each probe of the
CC   array; identifying exons in a eukaryotic genome, comprising (a)
CC   algorithmically predicting at least one exon from genomic sequences of
CC   the eukaryote; and (b) detecting specific hybridisation of detectably
CC   labeled nucleic acids from eukaryote lung mRNA, to a single exon probe,
CC   having a fragment identical to the predicted exon, the probe is included
CC   in the above mentioned microarray; assigning exons to a single gene,
CC   comprising (a) identifying exons from genomic sequence by the method
CC   above and (b) measuring the expression of each of the exons in several
CC   tissues and/or cell types using hybridisation to a single exon
CC   microarrays having a probe with the exon, where a common pattern of
CC   expression of the exons in the tissues and/or cell types indicates that
CC   the exons should be assigned to a single gene; a peptide comprising one
CC   of 12011 sequences, mentioned in the specification, or encoded by the
CC   probes/open reading frames (ORF). The probes are used for gene expression
CC   analysis, and for identifying exons in a gene, particularly using human
CC   lung derived mRNA and for the study of lung diseases such as asthma, lung
CC   cancer, chronic obstructive pulmonary disease (COPD), interstitial lung
CC   disease (ILD), familial idiopathic pulmonary fibrosis, neurofibromatosis,
```

```
CC   tuberous sclerosis, Gaucher's disease, Niemann-Pick disease, Hermansky-
CC   Pudlak syndrome, sarcoidosis, pulmonary haemosiderosis, pulmonary
CC   histiocytosis, lymphangioleiomyomtosis, pulmonary alveolar proteinosis,
CC   Karagener syndrome, fibrocystic pulmonary dysplasia, primary ciliary
CC   dyskinesis, pulmonary hypertension and hyaline membrane disease. The
CC   present sequence is a peptide/protein encoded by a single exon probe of
CC   the invention. Note: The sequence data for this patent did not form part
CC   of the printed specification, but was obtained in electronic format
CC   directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 75 AA;

  Query Match             100.0%;  Score 54;  DB 5;  Length 75;
  Best Local Similarity   100.0%;  Pred. No. 0.27;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         49 PRCGNPDVA 57


RESULT 29
AAY07349
ID   AAY07349 standard; protein; 80 AA.
XX
AC   AAY07349;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Fragment of human type IV matrix metalloprotease protein.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Homo sapiens.
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
DR   N-PSDB; AAX34392.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Disclosure; Fig 13; 61pp; English.
XX
CC   This sequence represents a fragment of a human type IV matrix
CC   metalloprotease (MMP) zymogen (precursor protein). The invention relates
CC   to MMP inhibitor peptides which can be used to treat tissue damage caused
CC   by activated MMPs, e.g. for treating inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarcoidosis. Antibodies to the peptides
CC   can be used to detect the MMPs and can distinguish activated from latent
CC   enzyme. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC   2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 80 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 30
AAG78385
ID   AAG78385 standard; protein; 80 AA.
XX
AC   AAG78385;
XX
DT   18-JUN-2002  (first entry)
XX
DE   Rat/mouse/human matrix metalloproteinase, residues 30-109.
XX
KW   Cytostatic; antidiabetic; ophthalmological; antirheumatic; antiarthritic;
KW   antipsoriatic; osteopathic; antiinflammatory; tumour;
KW   antiarteriosclerotic; cancer; neovascularisation; diabetic retinopathy;
KW   rheumatoid arthritis; psoriasis; extracellular matrix destruction;
KW   osteoarthritis; atherosclerosis; matrix metalloproteinase; MMP;
KW   angiogenesis; propeptide; gelatinase A; type IV collagenase;
KW   EC 3.4.24.24; rat; mouse; human.
XX
OS   Homo sapiens.
OS   Mus musculus.
OS   Rattus norvegicus.
XX
PN   WO200180811-A2.
XX
PD   01-NOV-2001.
XX
PF   19-APR-2001; 2001WO-US040554.
XX
PR   27-APR-2000; 2000US-0200115P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
XX
PI   Weissbach L;
XX
DR   WPI; 2002-034402/04.
XX
PT   Use of a polypeptide for inhibiting tumor growth, inhibiting angiogenesis
PT   and inhibiting extracellular matrix destruction, and treating e.g. cancer
PT   and rheumatoid arthritis.
XX
PS   Claim 1; Fig 1; 22pp; English.
XX
CC   The present sequence represents amino acids 30-109 (the propeptide) of
CC   human, rat and mouse MMP-2 (EC 3.4.24.24). The three sequences are 100%
CC   identical. The specification describes a method of inhibiting tumour
CC   growth, inhibiting angiogenesis or inhibiting extracellular matrix
CC   destruction, comprising the administration of a polypeptide. The
CC   polypeptide may be a matrix metalloproteinase (MMP-2) propeptide or an
CC   MMP-2 propeptide-like polypeptide. MMP-2 is also known as gelatinase A.
CC   The invention has cytostatic, antidiabetic, antirheumatic,
CC   ophthalmological, antiarthritic, antipsoriatic, osteopathic,
CC   antiinflammatory and antiarteriosclerotic. The invention may be used for
CC   treating cancer and other conditions characterised by excessive
CC   neovascularisation, e.g. diabetic retinopathy, rheumatoid arthritis, age-
CC   related macular degeneration and psoriasis; also diseases or disorders
CC   involving extracellular matrix destruction, e.g. osteoarthritis,
CC   periodontal disease and atherosclerosis. The polypeptides may be
CC   administered in combination with conventional anticancer treatments, e.g.
CC   surgery, radiation or chemotherapy
XX
SQ   Sequence 80 AA;

  Query Match             100.0%;  Score 54;  DB 5;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 31
AAY07338
ID   AAY07338 standard; peptide; 85 AA.
XX
AC   AAY07338;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Fragment of human Type IV matrix metalloprotease protein.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Homo sapiens.
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Claim 4; Page 41; 61pp; English.
XX
CC   This sequence represents a fragment of a tyep IV matrix metalloprotease
CC   (MMP) secreted by human tumour cells. The invention relates to the
CC   generation of MMP inhibitor peptides of the formula: aa1-aa2-aa3-aa4-C
CC   where aa1 and aa4 is R or K; aa2 is K, Q or N; aa3 is P, A, G, L, I or V;
CC   and C is a cysteine having a free sulphydryl group. The peptides can be
CC   used to treat tissue damage caused by activated MMPs, e.g. for treating
CC   inappropriate angiogenesis, arthritis, tumour growth, invasion and
CC   metastasis and granulomatous inflammatory conditions such as sarcoidosis.
CC   Antibodies to the peptides can be used to detect the MMPs and can
CC   distinguish activated from latent enzyme. (Updated on 25-MAR-2003 to
CC   correct PR field.) (Updated on 25-MAR-2003 to correct PA field.) (Updated
CC   on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 85 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 85;
  Best Local Similarity   100.0%;  Pred. No. 0.31;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 32
AAG78386
ID   AAG78386 standard; protein; 92 AA.
XX
AC   AAG78386;
XX
DT   18-JUN-2002  (first entry)
XX
DE   Recombinant human MMP-2 propeptide.
XX
KW   Cytostatic; antidiabetic; ophthalmological; antirheumatic; antiarthritic;
KW   antipsoriatic; osteopathic; antiinflammatory; tumour;
KW   antiarteriosclerotic; cancer; neovascularisation; diabetic retinopathy;
KW   rheumatoid arthritis; psoriasis; extracellular matrix destruction;
KW   osteoarthritis; atherosclerosis; matrix metalloproteinase; MMP;
KW   angiogenesis; propeptide; recombinant protein; gelatinase A;
KW   type IV collagenase; EC 3.4.24.24; enzyme.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Domain          5. .10
FT                   /label= Polyhistidine_tag
XX
PN   WO200180811-A2.
XX
PD   01-NOV-2001.
XX
PF   19-APR-2001; 2001WO-US040554.
XX
PR   27-APR-2000; 2000US-0200115P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
XX
PI   Weissbach L;
XX
DR   WPI; 2002-034402/04.
DR   N-PSDB; AAI64189.
XX
PT   Use of a polypeptide for inhibiting tumor growth, inhibiting angiogenesis
PT   and inhibiting extracellular matrix destruction, and treating e.g. cancer
PT   and rheumatoid arthritis.
XX
PS   Example; Page 9; 22pp; English.
XX
CC   The present sequence is that of a recombinant human MMP-2 propeptide with
CC   a N-terminal polyhistidine tag (EC 3.4.24.24). The propeptide is encoded
CC   by the nucleotide sequence given in AAI64189. The specification describes
CC   a method of inhibiting tumour growth, inhibiting angiogenesis or
CC   inhibiting extracellular matrix destruction, comprising the
CC   administration of a polypeptide. The polypeptide may be a matrix
CC   metalloproteinase (MMP-2) propeptide or an MMP-2 propeptide-like
CC   polypeptide. MMP-2 is also known as gelatinase A. The invention has
CC   cytostatic, antidiabetic, antirheumatic, ophthalmological, antiarthritic,
CC   antipsoriatic, osteopathic, antiinflammatory and antiarteriosclerotic.
CC   The invention may be used for treating cancer and other conditions
CC   characterised by excessive neovascularisation, e.g. diabetic retinopathy,
CC   rheumatoid arthritis, age-related macular degeneration and psoriasis;
CC   also diseases or disorders involving extracellular matrix destruction,
CC   e.g. osteoarthritis, periodontal disease and atherosclerosis. The
CC   polypeptides may be administered in combination with conventional
CC   anticancer treatments, e.g. surgery, radiation or chemotherapy
XX
SQ   Sequence 92 AA;

  Query Match             100.0%;  Score 54;  DB 5;  Length 92;
  Best Local Similarity   100.0%;  Pred. No. 0.33;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         83 PRCGNPDVA 91


RESULT 33
AEA20074
ID   AEA20074 standard; protein; 194 AA.
```

XX
AC AEA20074;
XX
DT 11-AUG-2005 (first entry)
XX
DE Novel human polypeptide SEQ ID NO 768.
XX
KW vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW DNA purification; protein purification; osteoarthritis; antiarthritic;
KW osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;
KW periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW cerebrovascular ischemia; cerebroprotective; vasotropic;
KW cardiovascular disease; autoimmune disease; immunosuppressive;
KW immune disorder; viral infection; virucide; infection; cancer;
KW cytostatic; neoplasm.
XX
OS Homo sapiens.
XX
PN WO2005049806-A2.
XX
PD 02-JUN-2005.
XX
PF 11-MAR-2004; 2004WO-US007412.
XX
PR 14-MAR-2003; 2003US-00389559.
XX
PA (NUVE-) NUVELO INC.
XX
PI Tang TY, Wang J, Wang ZW, Zhang J, Ren F, Zhou P, Ma Y;
PI Ghosh M, Xue A, Asundi V, Zhao Q, Wang D, Goodrich R, Chen R;
PI Wehrman T, Weng G, Boyle B;
XX
DR WPI; 2005-417730/42.
DR N-PSDB; AEA19507.
XX
PT New polynucleotide encoding a polypeptide with biological activity,
PT useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT CNS and peripheral disease, stroke, autoimmune disorders, viral
PT infection, or cancer.
XX
PS Claim 20; SEQ ID NO 768; 500pp; English.
XX
CC The invention describes a new isolated polynucleotide (I) encoding a
CC polypeptide with biological activity comprising: a nucleotide sequence of
CC SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC to the sequence of (i) under stringent hybridization conditions; or a
CC nucleotide sequence having greater than 99% sequence identity with the
CC sequence of (i). Also described are: a(n) (expression)vector comprising
CC (I); a host cell genetically engineered to comprise (I) operatively,
CC associated with a regulatory sequence that modulates expression of the
CC polynucleotide in the host cell; an isolated polypeptide comprising a
CC sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC polynucleotide hybridizing under stringent conditions with any one of SEQ
CC ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC carrier; an antibody directed against the polypeptide of (3); a method
CC for detecting (I) in a sample; a method for detecting the polypeptide of
CC (3) in a sample; a method for identifying a compound that binds to the
CC polypeptide of (3); a method of producing the polypeptide of (3); and a
CC collection of polynucleotides, where the collection comprising of at
CC least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC 568-1134. All sequences are fully defined in the specification. The
CC sequences and methods are useful in diagnostics, forensic, and gene
CC mapping, in identifying of mutations responsible for genetic disorders or
CC other traits, in assessing biodiversity, and for producing many other
CC types of data and products dependent on DNA and amino acid sequences. The
CC composition and method are useful for treating a disease or disorder,
CC e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC autoimmune disorders, viral infection, or cancer. This is the amino acid
CC sequence of a novel polypeptide of the invention.
XX
SQ Sequence 194 AA;

```
  Query Match             100.0%;  Score 54;  DB 9;  Length 194;
  Best Local Similarity   100.0%;  Pred. No. 0.71;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         65 PRCGNPDVA 73
```

RESULT 34
ADF59546
ID ADF59546 standard; protein; 445 AA.
XX
AC ADF59546;
XX
DT 12-FEB-2004 (first entry)
XX
DE Human polypeptide sequence SEQ ID NO:1954.
XX
KW biological activity; genetic engineering; hybridisation probe; oligomer;
KW primer; chromosome mapping; gene mapping; recombinant protein production;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003080795-A2.
XX
PD 02-OCT-2003.
XX
PF 09-AUG-2002; 2002WO-US025485.
XX
PR 09-AUG-2001; 2001US-0311261P.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Yang Y, Wang Z, Weng G, Ma Y;
XX
DR WPI; 2003-876918/81.
DR N-PSDB; ADF58546.
XX
PT New polynucleotides, useful as hybridization probes, oligomers or
PT primers, for chromosome or gene mapping, for the recombinant production
PT of proteins, and for generating antisense DNA or RNA.
XX
PS Claim 20; SEQ ID NO 1954; 571pp; English.
XX
CC The present sequence represents a polypeptide (II) with biological
CC activity, which is encoded by an isolated polynucleotide sequence (I)
CC from the present invention . Also described: (1) a vector comprising (I);
CC (2) an expression vector comprising (I); (3) a host cell genetically
CC engineered to comprise (I) which is operatively associated with a
CC regulatory sequence that modulates expression of (I) in the host cell;
CC (4) a polypeptide (II) encoded by (I); (5) a composition comprising the
CC polypeptide of (4) and a carrier; (6) an antibody directed against the
CC polypeptide of (4); (7) detecting (I) or the polypeptide of (4) in a
CC sample; (8) identifying a compound that binds to the polypeptide of (4);
CC (9) producing the polypeptide of (4); and (10) a collection of
CC polynucleotides comprising at least one of the polynucleotide sequences
CC (I). The polynucleotides (I) can be used as hybridisation probes,
CC oligomers or primers, for chromosome or gene mapping, for the recombinant
CC production of proteins, and for generating antisense DNA or RNA.
XX
SQ Sequence 445 AA;

```
  Query Match             100.0%;  Score 54;  DB 7;  Length 445;
  Best Local Similarity   100.0%;  Pred. No. 1.6;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

RESULT 35
AEA90447
ID AEA90447 standard; protein; 462 AA.
XX
AC AEA90447;
XX
DT 08-SEP-2005 (first entry)
XX
DE Human lung specifc protein, DEX0486_001.aa.1.
XX
KW DNA hybridization; diagnosis; diagnostic; lung tumor; vaccine;
KW cytostatic; gene therapy; drug screening.
XX
OS Homo sapiens.
XX
PN US2005142572-A1.
XX
PD 30-JUN-2005.
XX
PF 24-MAY-2004; 2004US-00852707.
XX
PR 22-MAY-2003; 2003US-0473941P.
XX
PA (MACI/) MACINA R A.
PA (TURN/) TURNER L R.
PA (SUNY/) SUN Y.
XX
PI Macina RA, Turner LR, Sun Y;
XX
DR WPI; 2005-457785/46.
XX
PT New nucleic acid molecule from Homo sapiens, useful for identifying,
PT diagnosing, monitoring, staging, imaging and treating a patient with lung
PT cancer and non-cancerous diseases.
XX
PS Claim 12; SEQ ID NO 56; 247pp; English.
XX
CC The present invention relates to human nucleic acid molecules that are
CC specific to lung cells, lung tissue and/or the lung organ. These lung
CC specific nucleic acids may be naturally occurring cDNA, genomic DNA, RNA
CC or a fragment, or a non-naturally occurring nucleic acid. Due to
CC alternative splicing and transcriptional modification one lung-specific
CC gene may encode for multiple lung specific RNA's. Specifically claimed is
CC new isolated nucleic acid molecule encoding a protein sequence selected
CC from 83 (SEQ ID NO: 56-138) sequences; and a nucleic acid selected from
CC 56(SEQ ID NO: 1-55) sequences. Described is a method of determining the
CC presence of a lung specific nucleic acid or protein in a sample; and a
CC method of diagnosing or monitoring the presence and metastases of lung
CC cancer in a patient. Claimed is a vaccine comprising the polypeptide or
CC the nucleic acid encoding the polypeptide. Determining the presence of a
CC lung specific nucleic acid in a sample comprises contacting the sample
CC with a nucleic acid molecule above which will hybridize to a lung
CC specific nucleic acid. A composition consisting of the nucleic acid
CC molecule or the polypeptide is useful for treating a patient with lung
CC cancer, where the administration induces an immune response against the
CC lung cancer cell expressing the nucleic acid molecule or polypeptide. The
CC nucleic acid molecule and polypeptide are also useful for identifying,
CC diagnosing, monitoring, staging, imaging and treating non-cancerous
CC disease states in lung, identifying lung tissue, monitoring and
CC identifying and/or designing (ant)agonists of the polypeptide, and for
CC gene therapy. The present sequence is a human lung specifc protein.
XX
SQ Sequence 462 AA;

```
  Query Match             100.0%;  Score 54;  DB 9;  Length 462;
  Best Local Similarity   100.0%;  Pred. No. 1.7;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

RESULT 36
ABG24001
ID ABG24001 standard; protein; 468 AA.
XX
AC ABG24001;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #23992.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US008631.
XX
PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR N-PSDB; AAS88188.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
PS Claim 20; SEQ ID NO 54360; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC amino acid sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 468 AA;

```
  Query Match             100.0%;  Score 54;  DB 4;  Length 468;
  Best Local Similarity   100.0%;  Pred. No. 1.7;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
```

```
Db         86 PRCGNPDVA 94


RESULT 37
ABM84057
ID   ABM84057 standard; protein; 623 AA.
XX
AC   ABM84057;
XX
DT   18-NOV-2004  (first entry)
XX
DE   Human diagnostic and therapeutic pprotein SEQ ID NO:4306.
XX
KW   gene therapy; human diagnostic and therapeutic polynucleotide; dithp.
XX
OS   Homo sapiens.
XX
PN   WO2004023973-A2.
XX
PD   25-MAR-2004.
XX
PF   12-SEP-2003; 2003WO-US028227.
XX
PR   12-SEP-2002; 2002US-0410259P.
PR   12-SEP-2002; 2002US-0410260P.
XX
PA   (INCY-) INCYTE CORP.
XX
PI   Schmidt JP,  Wright RJ,  Bruns CM,  Marjanovic MM,  Shen F;
PI   Harthshorne TA,  Suchorolski MT,  Altus CM,  Pitts SJ,  Elder LV;
PI   Mooney EM,  Delegeane AM,  Panesar IS,  Banville SC,  Reddy TP;
PI   Stevens KA,  Blanchard JL,  Panzer SR,  Wang X,  Au AP,  Gerstin EH;
PI   Peralta CH,  Anderson SB,  Rioux P,  Shen EJ,  Wu MC,  Stuve LL;
PI   Lagace RE,  Spiro PA,  Stewart EA,  Wingrove J,  Vitt UA,  Kirton ES;
PI   Xu Y,  Kwong M,  Policky JL,  Hurwitz BL,  Ma Y,  Jackson JL,  Gietzen D;
PI   Patury S,  Shi X,  Suarez CJ;
XX
DR   WPI; 2004-329368/30.
DR   N-PSDB; ACN42709.
XX
PT   New diagnostic and therapeutic polynucleotides and polypeptides, useful
PT   in diagnosing a condition, disease or disorder associated with human
PT   molecules, e.g. autoimmune or inflammatory disorders, in gene therapy or
PT   in gene mapping.
XX
PS   Claim 27; Page; 190pp; English.
XX
CC   The invention relates to novel diagnostic and therapeutic polynucleotides
CC   selected from one of the 2722 sequences defined in the specification. A
CC   polynucleotide of the invention may have a use in gene therapy. The human
CC   diagnostic and therapeutic polynucleotides (dithp) or polypeptides may be
CC   used to diagnose a particular condition, disease or disorder associated
CC   with human molecules, e.g. cell proliferative disorders,
CC   autoimmune/inflammatory disorder, developmental disorder, endocrine
CC   disorder, neurological disorders, gastrointestinal disorders, or
CC   infections caused by virus, bacteria, fungi or parasite. The dithp
CC   molecules may also be used in genetic mapping, in identifying individuals
CC   from minute biological samples, in detecting single nucleotide
CC   polymorphisms, as molecular weight markers, and for somatic or germline
CC   gene therapy. The present sequence represents a dithp protein of the
CC   invention. Note: The sequence data for this patent is not represented in
CC   the printed specification, but was obtained in electronic format directly
CC   from WIPO at www.wipo.int/pct/en/sequences/listing.htm
XX
SQ   Sequence 623 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 623;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 38
AAP96143
ID   AAP96143 standard; protein; 631 AA.
XX
AC   AAP96143;
XX
DT   25-MAR-2003  (revised)
DT   09-MAY-1991  (first entry)
XX
DE   Sequence of human type IV collagenase (gelatinase) in pGEL 186.2.
XX
KW   Hypertrophic scar; keloid; intervertebral disc disease; enzyme.
XX
OS   Homo sapiens.
XX
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
DR   N-PSDB; AAN91700.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Disclosure; Fig 3; 36pp; English.
XX
CC   The original source of the protein material was H-ras transformed human
CC   bronchial epithelial cells (TBE-1). The AA sequence was then used to
CC   develop oligonucleotide probes which were used to screen a cDNA library
CC   of human skin fibroblast mRNA. The longest clone, pGEL 186.2, represented
CC   almost the full gelatinase mRNA sequence except the leader sequence
CC   encoding the first few AA's of the signal peptide. (Updated on 25-MAR-
CC   2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 39
AAP91139
ID   AAP91139 standard; protein; 631 AA.
XX
AC   AAP91139;
XX
DT   25-MAR-2003  (revised)
DT   18-DEC-1989  (first entry)
XX
DE   Human type IV collagenase (gelatinase).
XX
KW   Human type IV collagenase; gelatinase; hypertrophic scars; keloids;
KW   intervertebral disc disease; extracellular matrix metalloprotease;
KW   bronchial epithelial cells; TBE-1 cells; pGel186.2; type II motif;
KW   fibonectin; collagen-binding domain.
XX
```

```
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1. .192
FT   Domain          193. .367
FT   Duplication     197. .254
FT   Duplication     255. .312
FT   Duplication     313. .368
FT   Domain          368. .631
XX
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Claim 2; Fig 6; 36pp; English.
XX
CC   Human type IV collagenase (gelatinase). Protein source was H-ras
CC   transformed human bronchial epithelial cells (TBE-1). The sequence was
CC   determined from clone pGel 186.2 which represents almost the full mRNA
CC   sequence. Feature 1 is the N-terminal domain, I; feature 2 is a middle
CC   domain, II, which is organised into 3 x 58 amino acid long head to tail
CC   repeats (features 4,5,and 6). These show homology to the type II motif
CC   collagen binding domain of fibronectin. Feature 3 is the C-terminal
CC   domain. The enzyme could be used in the treatment of hypertrophic scars,
CC   keloids, and intervertebral disc disease. See also AAN91700. (Updated on
CC   25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA
CC   field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 40
AAR07969
ID   AAR07969 standard; protein; 631 AA.
XX
AC   AAR07969;
XX
DT   25-MAR-2003  (revised)
DT   17-DEC-2001  (revised)
DT   16-JAN-1991  (first entry)
XX
DE   Complete type IV collagenase.
XX
KW   Type IV collagenase; peptide fragments; metalloproteinase detection;
KW   antibodies; metalloptroteinase inhibition; angiogenesis; arthritis;
KW   tumour growth; metastasis; granulomatous inflammatory conditions;
KW   sarciodosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .18
FT                   /label= 1
FT   Peptide         19. .33
FT                   /label= 2
FT   Peptide         26. .42
FT                   /label= 3
FT   Protein         34. .50
FT                   /label= 4
FT   Peptide         51. .66
FT                   /label= 5
FT   Peptide         67. .89
FT                   /label= 7
FT   Peptide         67. .80
FT                   /label= 6
FT   Peptide         69. .75
FT                   /label= 8
FT   Peptide         75. .94
FT                   /label= 9
FT   Peptide         141. .150
FT                   /label= 10
FT   Peptide         299. .307
FT                   /label= 11
FT   Peptide         308. .318
FT                   /label= 12
FT   Peptide         344. .368
FT                   /label= 13
FT   Peptide         371. .386
FT                   /label= 14
FT   Peptide         372. .375
FT                   /label= 15
FT   Peptide         472. .491
FT                   /label= 16
XX
PN   USN7317407-N.
XX
PD   21-AUG-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
XX
PA   (USSH ) US NAT CANCER INST.
PA   (USDC ) US SEC OF COMMERCE.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsch H;
XX
DR   WPI; 1990-290093/38.
XX
PT   New type-IV collagenase peptide fragments - used for metallo-proteinase
PT   detection and inhibition and for producing antibodies for enzyme
PT   detection.
XX
PS   Disclosure; Fig 1; -pp; English.
XX
CC   Type IV procollagenase was purified from human A2058 melanoma cells. The
CC   complete amino acid sequence was determined (see also Hoyhtya, M. et al,
CC   (1988) FEBS Letters 233, 109-113). Based on this sequence, peptides were
CC   synthesised (see features) having homology with a histidine contg. domain
CC   at residues 371-386, a cysteine contg. domain at residues 200-370, the 80
CC   residue amino terminus or a region 159 residues from the carboxy
CC   terminus. These regions correspond to the domain of the enzyme involved
CC   in enzyme activation and interaction of the enzyme with the substrate.
CC   The peptides are useful in metalloproteinase detection and inhibition.
CC   They can be used in the treatment of inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarciodisis. The peptides can be used to
CC   produce antibodies. Peptide 6, at concn. of 0.1 mM inhibited 80% of the
CC   enzyme activity. See also US7494796-A and WO9010228. (Note: Revised entry
CC   submitted to correct the patent number format of US Government-owned NTIS
CC   applications to prevent clashes with ongoing US granted patent numbers.
CC   For further information please visit the Derwent web site at
CC   www.derwent.com/dwpi/updates/ntis_us.html.) (Updated on 25-MAR-2003 to
CC   correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
```

```
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 41
AAY07350
ID   AAY07350 standard; protein; 631 AA.
XX
AC   AAY07350;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Human type IV matrix metalloprotease protein.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 452
FT                   /note= "designated in specification as U"
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Disclosure; Fig 1; 61pp; English.
XX
CC   This sequence represents a human type IV matrix metalloprotease (MMP)
CC   zymogen (precursor protein). The invention relates to MMP inhibitor
CC   peptides which can be used to treat tissue damage caused by activated
CC   MMPs, e.g. for treating inappropriate angiogenesis, arthritis, tumour
CC   growth, invasion and metastasis and granulomatous inflammatory conditions
CC   such as sarcoidosis. Antibodies to the peptides can be used to detect the
CC   MMPs and can distinguish activated from latent enzyme. (Updated on 25-MAR
CC   -2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 42
AAW41226
ID   AAW41226 standard; protein; 631 AA.
XX
AC   AAW41226;
XX
DT   09-JUN-1998  (first entry)
XX
DE   Human mature matrix metalloprotease-2 (MMP-2) protein sequence.
XX
KW   Matrix metalloprotease-2; MMP-2; alpha-v-beta-5 antagonist; treatment;
KW   vitronectin receptor; inhibition; angiogenesis; integrin; tumour growth;
KW   restenosis; neovascularisation.
XX
OS   Homo sapiens.
XX
PN   WO9745447-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009099.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA,  Friedlander M;
XX
DR   WPI; 1998-041758/04.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta5
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Fig 16; 117pp; English.
XX
CC   The present sequence represents the mature protein of human matrix
CC   metalloprotease-2 (MMP-2). Fragments of this protein (AAW41228-33) are
CC   able to act as alpha-v-beta-5 antagonists. Alpha-v-beta-5 is a
CC   vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit
CC   angiogenesis. The specification describes a novel labelled package that
CC   contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising
CC   polypeptide that binds to integrin alpha-v-beta-5 and includes a part of
CC   the C-terminal domain of MMP. The antagonists are used to inhibit
CC   angiogenesis in inflamed tissue, in solid tumours or metastases, and in a
CC   wide range of ocular disorders (e.g. diabetic or other forms of
CC   retinopathy, neovascular glaucoma, or corneal transplants). They are
CC   particularly used to induce regression or to inhibit growth of tumours.
CC   The alpha-v-beta-5 antagonists can also be used to treat restenosis
CC   caused by migration of smooth muscle cells following angioplasty and to
CC   reduce blood supply to selected tissues. The antagonists particularly
CC   inhibit neovascularisation where this is induced by cytokines, e.g.
CC   transforming growth factor alpha, epidermal growth factor or especially
CC   vascular endothelial growth factor
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 43
ADM48668
ID   ADM48668 standard; protein; 631 AA.
XX
AC   ADM48668;
```

```
XX
DT   03-JUN-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2) protein.
XX
KW   Cancer; metastasis; matrix metalloproteinase-2; MMP-2; vaccine;
KW   immune response; gene therapy; cytostatic; enzyme; human.
XX
OS   Homo sapiens.
XX
PN   US2003139345-A1.
XX
PD   24-JUL-2003.
XX
PF   23-JAN-2003; 2003US-00350258.
XX
PR   23-JAN-2002; 2002US-0351317P.
XX
PA   (NETK/) NETKE S.
PA   (NIED/) NIEDZWIECKI A.
PA   (RATH/) RATH M.
XX
PI   Netke S,  Niedzwiecki A,  Rath M;
XX
DR   WPI; 2003-897356/82.
XX
PT   New synthetic oligopeptide, useful for blocking or treating cancer
PT   invasion and metastases in a human patient, particularly as a vaccine for
PT   treating or preventing diagnosing brain cancer, lung cancer, skin cancer
PT   or breast cancer.
XX
PS   Example 1; Fig 1; 11pp; English.
XX
CC   The present invention relates to novel synthetic oligopeptides effective
CC   in blocking cancer invasion and metastasis. The invention relates to
CC   matrix metalloproteinase-2 (MMP-2) peptides. The synthetic oligopeptides
CC   are useful as pharmaceutical compositions for blocking or treating cancer
CC   invasion and metastases in a human patient. In particular, they are
CC   useful for treating brain cancer, lung cancer, skin cancer or breast
CC   cancer. The oligopeptides are also useful as vaccines for preventing
CC   these cancers, enhancing immune response or raising antibodies for assays
CC   used to diagnose diseases involving matrix metalloproteinases or clinical
CC   monitoring of the progression or regression of disease. They are also
CC   useful in gene therapy. The present sequence is the human MMP-2 protein.
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 7;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 44
ADT05996
ID   ADT05996 standard; protein; 631 AA.
XX
AC   ADT05996;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Human mature matrix metalloprotease (MMP-2).
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; human;
KW   enzyme.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          410. .631
FT                   /note= "Corresponds to SEQ ID NO:17"
FT   Domain          439. .631
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to SEQ ID NO:18
FT   Region          439. .546
FT                   /note= "Corresponds to SEQ ID NO:20"
FT   Region          439. .512
FT                   /note= "Corresponds to SEQ ID NO:19"
FT   Region          510. .631
FT                   /note= "Corresponds to SEQ ID NO:21"
FT   Region          543. .631
FT                   /note= "Corresponds to SEQ ID NO:22"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents human mature matrix
CC   metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC   invention.
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 45
ADT05997
ID   ADT05997 standard; protein; 633 AA.
XX
AC   ADT05997;
XX
```

```
DT   30-DEC-2004  (first entry)
XX
DE   Mouse mature matrix metalloprotease (MMP-2).
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; mouse;
KW   murine; enzyme.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   Domain          441. .633
FT                   /label = Hemopexin_domain
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents mouse mature matrix
CC   metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC   invention.
XX
SQ   Sequence 633 AA;

  Query Match            100.0%;  Score 54;  DB 8;  Length 633;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 46
AAB20490
ID   AAB20490 standard; protein; 644 AA.
XX
AC   AAB20490;
XX
DT   21-JUN-2001  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2).
XX
KW   Matrix metalloproteinase-2; MMP-2; human; pain; analgesic;
KW   nerve tissue damage; stroke; haemorrhage; reperfusion injury;
KW   cerebral ischaemia; cerebral infarction; narcotic tolerance;
KW   narcotic withdrawal.
XX
OS   Homo sapiens.
XX
PN   WO200126671-A1.
XX
PD   19-APR-2001.
XX
PF   11-OCT-2000; 2000WO-US027949.
XX
PR   12-OCT-1999;   99US-0158787P.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
PI   Romanic Arnold A,  Barone FC,  Bingham S;
XX
DR   WPI; 2001-290654/30.
DR   N-PSDB; AAF30807.
XX
PT   Polypeptide for the treatment of pain and the reduction of tissue damage
PT   comprises an inhibitor of human matrix metalloproteinase.
XX
PS   Claim 1; Fig 2; 61pp; English.
XX
CC   The present sequence is that of human matrix metalloproteinase-2 (MMP-2),
CC   previously known as 72 kDa gelatinase and gelatinase A. MMP-2 is capable
CC   of degrading the extracellular matrix components of the basement
CC   membrane. The invention relates to methods for treating pain in a patient
CC   by administering a dual inhibitor of MMP-2 and MMP-9 (see AAB20491). The
CC   administration of an inhibitor of MMP-2 is useful for treating nerve
CC   tissue damage (claimed), where the patient is suffering from a disease or
CC   disorder selected from stroke, haemorrhage, reperfusion injury, cerebral
CC   ischaemia and cerebral infarction (claimed). The method is useful for
CC   treating a disease, disorder or nerve tissue damage selected from
CC   enhanced or exaggerated sensitivity to acute pain, burn pain, atypical
CC   facial pain, neuropathic pain, back pain, complex regional pain syndrome
CC   I and II, arthritic pain, sports injury pain, pain related to virus
CC   infection, post-herpetic neuralgia, phantom limb pain, labour pain,
CC   cancer pain, post-chemotherapy pain, post-operative pain, post-stroke
CC   pain, physiological pain, inflammatory pain, acute inflammatory
CC   conditions/visceral pain, neuralgia, painful diabetic retinopathy,
CC   traumatic nerve injury, and tolerance to narcotics or withdrawal from
CC   narcotics (claimed). MMP-2 polypeptides can also be used to screen for
CC   agonist or antagonist (inhibitor) compounds
XX
SQ   Sequence 644 AA;

  Query Match            100.0%;  Score 54;  DB 4;  Length 644;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         84 PRCGNPDVA 92


RESULT 47
AAR06420
ID   AAR06420 standard; protein; 660 AA.
XX
AC   AAR06420;
XX
DT   25-MAR-2003  (revised)
DT   13-DEC-1990  (first entry)
XX
```

```
DE   Type IV collagenase cDNA product.
XX
KW   hypertrophic scars; keloids; intervertebral disc disease; ds.
XX
OS   Homo sapiens.
XX
PN   US4923818-A.
XX
PD   08-MAY-1990.
XX
PF   15-MAY-1989;   89US-00352069.
XX
PR   15-MAY-1989;   89US-00352069.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Goldberg GL,  Eisen AZ;
XX
DR   WPI; 1990-245482/32.
DR   N-PSDB; AAQ05620.
XX
PT   Recombinant human type IV collagenase - used in treatment of hypertrophic
PT   scars, keloids and intervertebral disc disease.
XX
PS   Claim 3; Fig 9; 23pp; English.
XX
CC   cDNA clone enables production of type IV collagenase, useful in
CC   catalysing cleavage of extracellular matrix macromolecules, and in
CC   treatment of hypertrophic scars, keloids and invertebral disc disease.
CC   (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 48
AAB84607
ID   AAB84607 standard; protein; 660 AA.
XX
AC   AAB84607;
XX
DT   05-SEP-2001  (first entry)
XX
DE   Amino acid sequence of matrix metalloproteinase gelatinase A.
XX
KW   Growth factor; protein inhibitor; protease; damaged tissue;
KW   platelet-derived growth factor; PDGF; fibroblast growth factor; FGF;
KW   connective tissue derived growth factor; CTGF; chrysalin; VEGF;
KW   keratinocyte-derived growth factor; KGF; epidermal growth factor; EGF;
KW   transforming growth factor-beta; TGF-beta; matrix metalloproteinase; MMP;
KW   granulocyte macrophage colony stimulating factor; GM-CSF; uPA;
KW   vascular endothelial growth factor; urokinase plasminogen activator;
KW   dermal ulcer; wound.
XX
OS   Homo sapiens.
XX
PN   WO200149309-A2.
XX
PD   12-JUL-2001.
XX
PF   21-DEC-2000; 2000WO-IB001935.
XX
PR   29-DEC-1999;   99GB-00030768.
XX
PA   (PFIZ ) PFIZER LTD.
PA   (PFIZ ) PFIZER INC.
XX
PI   Davies MJ,  Huggins JP,  Mcintosh FS,  Occleston NL;
XX
DR   WPI; 2001-418351/44.
DR   N-PSDB; AAH28222.
XX
PT   Composition for the treatment of damaged tissue i.e. chronic wounds and
PT   dermal ulcers comprises an inhibitor agent i.e. a protease and a growth
PT   factor.
XX
PS   Disclosure; Page 552; 572pp; English.
XX
CC   The specification describes a pharmaceutical composition, comprising a
CC   growth factor, an inhibitor agent, i.e. a protease. The inhibitor agent
CC   inhibits the action of at least one specific adverse protein, i.e. a
CC   protease, that is upregulated in a damaged tissue such as a wound
CC   environment. Growth factors which are included in the composition of the
CC   invention are platelet-derived growth factor (PDGF), fibroblast growth
CC   factor (FGF), connective tissue derived growth factor (CTGF),
CC   keratinocyte-derived growth factor (KGF), transforming growth factor-beta
CC   (TGF-beta), granulocyte macrophage colony stimulating factor (GM-CSF),
CC   epidermal growth factor (EGF), vascular endothelial growth factor (VEGF),
CC   and chrysalin. Inhibitors which are included in the composition of the
CC   invention include inhibitors of urokinase-type plasminogen activator
CC   (uPA) and matrix metalloproteinase (MMP). The composition is useful for
CC   the treatment of chronic damaged tissue, i.e. wounds and dermal ulcers.
CC   The present sequence represents a human MMP-2, and is used to produce the
CC   composition of the invention
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 49
AAE10431
ID   AAE10431 standard; protein; 660 AA.
XX
AC   AAE10431;
XX
DT   10-DEC-2001  (first entry)
XX
DE   Human matrix metalloprotinase-2 (MMP-2) protein.
XX
KW   Human; matrix metalloproteinase; MMP-2; hair growth; antisense therapy;
KW   endopeptidase; skin cell; breast cancer; hair follicle; chromosome 11q22.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide          1. .27
FT                    /label= Signal_peptide
FT   Protein          28. .660
FT                    /label= Mature_MMP_2_protein
FT   Domain           100. .106
FT                    /label= Cysteine_switch_domain
FT   Domain           171. .195
FT                    /note= "Zinc and calcium binding domain"
XX
PN   WO200166766-A2.
XX
PD   13-SEP-2001.
XX
PF   06-MAR-2001; 2001WO-US007167.
XX
PR   06-MAR-2000; 2000US-0187196P.
XX
```

PA (DARW-) DARWIN MOLECULAR CORP.
PA (SCHA/) SCHATZMAN R.
XX
PI Fajardo M, Wang K, Smith R, Moss P;
XX
DR WPI; 2001-582276/65.
XX
PT Novel isolated matrix metalloproteinase-25 nucleic acid molecule and
PT proteins encoded by them whose inhibition is useful for modulation of
PT hair growth in mammals.
XX
PS Example 2; Fig 3; 119pp; English.
XX
CC The present sequence is human matrix metalloproteinase (MMP)-2 protein
CC used in the exemplification of the invention. MMP-25 DNA is located on
CC chromosome 11q22. Matrix metalloproteinases are a family of zinc
CC dependent endopeptidases that function extracellularly to degrade
CC proteins typically found in the extracellular matrix. MMP-25 is expressed
CC in skin cells of mammals, particularly in breast cells and hair
CC follicles. MMP-25 DNA is useful for identifying a nucleic acid molecule
CC encoding all or part of MMP by hybridising MMP-25 to a nucleic acid
CC sample and identifying a sequence that hybridises in the nucleic acid
CC sample. The identification step involves performing polymerase chain
CC reaction (PCR) to amplify the hybridising sequence. MMP-25 antibody is
CC useful for identifying type 25 MMP. MMP-25 protein inhibitors may be used
CC to modulate hair growth and breast cancer in a mammal
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 4; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 50
ABB79413
ID ABB79413 standard; protein; 660 AA.
XX
AC ABB79413;
XX
DT 08-JUL-2002 (first entry)
XX
DE Human matrix metalloproteinase 2 protein.
XX
KW Human; matrix metalloproteinase-2; MMP-2; enzyme; thrombolytic;
KW anticoagulant; cardiant; antiarteriosclerotic; cytostatic; osteopathic;
KW antiinflammatory; antibacterial; virucide; fungicide; antipsoriatic;
KW vulnerary; cerebroprotective; antianginal; ophthalmological;
KW antirheumatic; antiarthritic; antiulcer; vasotropic; nephrotropic;
KW alpha-v-beta-3 integrin receptor; thrombosis; tumour; osteoporosis;
KW infection; veterinary medicine; rheumatoid arthritis; Crohn's disease;
KW antimicrobial; antiseptic.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 466. .660
FT /label= PEX
FT Binding-site 489. .497
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 570. .585
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 588. .597
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
XX
PN WO200220566-A2.
XX
PD 14-MAR-2002.
XX
PF 28-AUG-2001; 2001WO-EP009899.
XX
PR 07-SEP-2000; 2000DE-01044325.
XX
PA (MERE) MERCK PATENT GMBH.
XX
PI Jonczyk A, Diefenbach B, Groth U, Zischinsky G;
XX
DR WPI; 2002-329868/36.
XX
PT New matrix metalloprotease-2 derivative peptides, are alpha-v-beta-3
PT integrin receptor inhibitors useful e.g. for treating thrombosis, cardiac
PT infarction, tumors, osteoporosis, inflammation or infections.
XX
PS Disclosure; Page 11; 35pp; German.
XX
CC The invention relates to peptides (ABB79414-ABB79426) derived from the C-
CC terminal fragment PEX of matrix metalloprotease-2 (MMP-2). Matrix MMP-2
CC derivatives of formula X-Y-Z (I) and their salts and solvates are
CC described. X = H, 1-10C alkanoyl or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues; Y = peptide fragment selected
CC from the sequence region 466-660 of human Pro-MMP-2; and Z = OH, NH_2, NH
CC -1-10C alkyl N(1-10C alkyl)_2 or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues. Primary amino groups are
CC optionally protected conventionally. The peptides and MMP-2 derivatives
CC are used for combating diseases involving interaction of ligands
CC (specifically MMP-2) with the alpha-v-beta-3 integrin receptor,
CC especially pathological processes supported or propagated by
CC angiogenesis, thrombosis, cardiac infarction, coronary heart disease,
CC arteriosclerosis, tumours, osteoporosis, fibrosis, inflammation,
CC infections, psoriasis or wound healing deficiency. More generally the
CC peptides and MMP-2 derivatives are useful in human and veterinary
CC medicine for the treatment and/or prophylaxis of thrombosis, myocardial
CC infarction, apoplexy, angina pectoris, tumour diseases, osteolytic
CC diseases (e.g. osteoporosis or hypercalcaemia), pathological angiogenic
CC diseases (e.g. inflammation), ophthalmological diseases (e.g. diabetic
CC retinopathy, macular degeneration, myopia, ocular histoplasmosis or
CC rubeotic glaucoma), rheumatoid arthritis, osteoarthritis, ulcerative
CC colitis, Crohn's disease, atherosclerosis, psoriasis, restenosis after
CC angioplasty, viral, bacterial or fungal infections, acute renal failure
CC or wound healing deficiency; as antimicrobial/antiseptic agents in
CC operations involving biomaterials, implants, catheters or cardiac
CC pacemakers); or as diagnostic agents or reagents. The present sequence is
CC that of the human MMP-2 protein
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 51
ABB90738
ID ABB90738 standard; protein; 660 AA.
XX
AC ABB90738;
XX
DT 30-MAY-2002 (first entry)
XX
DE Human Tumour Endothelial Marker polypeptide SEQ ID NO 208.
XX
KW Human; mouse; rat; TEM; tumour endothelial marker; NEM; PEM; cytostatic;
KW normal endothelial marker; pan-endothelial marker; immunostimulant;
KW antiangiogenic; tumour; neoangiogenesis; vascularised tumour;
KW polycystic kidney disease; diabetes; retinopathy; rheumatoid arthritis;
KW psoriasis.
XX
OS Homo sapiens.

XX
PN WO200210217-A2.
XX
PD 07-FEB-2002.
XX
PF 01-AUG-2001; 2001WO-US024031.
XX
PR 02-AUG-2000; 2000US-0222599P.
PR 11-AUG-2000; 2000US-0224360P.
PR 11-APR-2001; 2001US-0282850P.
XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI St Croix B, Kinzler KW, Vogelstein B;
XX
DR WPI; 2002-291856/33.
DR N-PSDB; ABL92092.
XX
PT An isolated molecule comprising an antibody variable region which
PT specifically binds to an extracellular domain of a tumor endothelial
PT marker (TEM) protein, useful for inhibiting tumor growth.
XX
PS Claim 54; Page 166-168; 331pp; English.
XX
CC The invention relates to an isolated molecule comprising an antibody
CC variable region which specifically binds to an extracellular domain of a
CC tumour endothelial marker (TEM) protein selected from ABB90732, ABB90740,
CC ABB90749, ABB90750 and ABB90769. The antibodies which bind to TEM
CC proteins have cytostatic, immunostimulant and antiangiogenic activity.
CC They are useful for inhibiting tumour growth, neoangiogenesis in subjects
CC bearing a vascularised tumour, polycystic kidney disease, diabetic
CC retinopathy, rheumatoid arthritis and psoriasis. Human, mouse and rat TEM
CC genes and the encoded proteins (ABL92075-ABL92141 and ABB90721-ABB90789)
CC are disclosed, as are marker oligonucleotide sequences: tumour
CC endothelial markers (TEM) ABL91996-ABL92041 and ABL92143-ABL92191; normal
CC endothelial markers (NEM) ABL92042-ABL92074; and pan-endothelial markers
CC (PEM) ABL91903-ABL91995
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 52
AAU84348
ID AAU84348 standard; protein; 660 AA.
XX
AC AAU84348;
XX
DT 08-MAY-2002 (first entry)
XX
DE Protein MMP2 differentially expressed in breast cancer tissue.
XX
KW Human; diagnosis of breast cancer; endometrial cancer; breast tumour;
KW MAI; mitotic activity index; cytostatic.
XX
OS Homo sapiens.
XX
PN WO200210436-A2.
XX
PD 07-FEB-2002.
XX
PF 27-JUL-2001; 2001WO-US023642.
XX
PR 28-JUL-2000; 2000US-0222093P.
XX
PA (BGHM) BRIGHAM & WOMENS HOSPITAL INC.
PA (BAAK/) BAAK J.
XX
PI Baak J, Mutter GL;
XX
DR WPI; 2002-180084/23.
DR N-PSDB; ABK35568.
XX
PT Diagnosing breast cancer comprises determining expression of nucleic acid
PT molecules or expression products that are differentially expressed in
PT normal and malignant tissue.
XX
PS Claim 37; Page 185-187; 219pp; English.
XX
CC The present invention relates to a method for diagnosing breast cancer in
CC a subject suspected of having endometrial cancer. The method comprises
CC determining the expression of a set of human genes or expression products
CC in an endometrial sample suspected of being cancerous. The human genes of
CC the invention are differentially expressed in breast tumours
CC characterised as high or low MAI (mitotic activity index). These sets of
CC genes can be used to discriminate between high and low MAI breast
CC tumours. The invention also provides DNA and protein microarrays for
CC analysing the expression of the human genes and their protein products.
CC The methods and arrays are useful for the diagnosis and prognosis of
CC endometrial cancer, selecting and monitoring treatment regimes, and
CC identification of compounds useful for the treatment of endometrial
CC cancer. AAU84311-AAU84361 represent the human proteins of the invention
CC that are differentially expressed in breast cancer tissue
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 53
ABU54445
ID ABU54445 standard; protein; 660 AA.
XX
AC ABU54445;
XX
DT 12-MAR-2003 (first entry)
XX
DE Human tumour endothelial marker TEM 7.
XX
KW Human; endothelial cell; EC; tumour endothelial cell; TEM; NEM;
KW Tumour endothelial marker; normal endothelial marker; PEM;
KW pan-endothelial marker; polycystic kidney disease; psoriasis;
KW diabetic retinopathy; rheumatoid arthritis; tumour angiogenesis;
KW neoangiogenesis; immune response; cytostatic; antidiabetic;
KW ophthalmological; antirheumatic; antiarthritic; antipsoriatic.
XX
OS Homo sapiens.
XX
PN WO200283874-A2.
XX
PD 24-OCT-2002.
XX
PF 10-APR-2002; 2002WO-US008253.
XX
PR 11-APR-2001; 2001US-0282850P.
PR 06-FEB-2002; 2002US-0354262P.
XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI Carson-Walter E, St Croix B, Kinzler KW, Vogelstein B;
XX
DR WPI; 2003-093016/08.
DR N-PSDB; ABX72017.

XX
PT New purified human transmembrane protein, designated as tumor endothelial
PT marker (TEM) 3, useful for detecting, diagnosing or treating tumors,
PT polycystic kidney disease, diabetic retinopathy, rheumatoid arthritis or
PT psoriasis.
XX
PS Disclosure; Page 173-174; 374pp; English.
XX
CC The present invention relates to a novel method for the isolation of
CC endothelial cells (ECs), and the identification of genes expressed in
CC normal and tumour ECs. Tumour endothelial marker (TEM), normal
CC endothelial marker (NEM), and pan-endothelial marker (PEM) genes are
CC identified in human ECs. The human EC marker proteins and the
CC polynucleotide sequences encoding them are useful for detecting,
CC diagnosing or treating tumours as well as polycystic kidney disease,
CC diabetic retinopathy, rheumatoid arthritis, and psoriasis. They are also
CC useful for inhibiting neoangiogenesis or tumour angiogenesis, for
CC inducing an immune response to tumour endothelial cells in a patient, or
CC for identifying candidate drugs for treating tumours. The present
CC sequence represents a human TEM or NEM protein of the invention
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 54
ABP97136
ID ABP97136 standard; protein; 660 AA.
XX
AC ABP97136;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 protein SEQ ID NO:14.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Example 1; Page 43-44; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents the human MMP-2 protein, which is used in the exemplification
CC of the present invention
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 55
AAO16608
ID AAO16608 standard; protein; 660 AA.
XX
AC AAO16608;
XX
DT 08-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 (MMP2) gelatinase protein.
XX
KW Human; enzyme; crystalline polypeptide; matrix metalloproteinase 9; MMP9;
KW gelatinase; metalloproteinase mediated disease; drug design; arthritis;
KW three-dimensional structure; MMP9 inhibitor; tumour growth;
KW cancer metastasis; osteoarthritis; atherosclerosis; restenosis;
KW periodontitis; multiple sclerosis; glomerulonephritis; MMP9 modulator;
KW graft-versus-host disease; non-insulin dependent diabetes; MMP2;
KW matrix metalloproteinase 2.
XX
OS Homo sapiens.
XX
PN WO2003002729-A1.
XX
PD 09-JAN-2003.
XX
PF 24-JUN-2002; 2002WO-SE001266.
XX
PR 27-JUN-2001; 2001SE-00002298.
XX
PA (ASTR) ASTRAZENECA AB.
XX
PI Jepson H, Minshull C, Pauptit R, Rowsell S;
XX
DR WPI; 2003-201502/19.
XX
PT Novel crystalline form of a polypeptide corresponding to the catalytic
PT domain of matrix metalloproteinase 9 protein, useful for selecting or
PT designing chemical modulators which are used for treating diabetes,
PT cancer, arthritis.
XX
PS Disclosure; Fig 7; 227pp; English.
XX
CC The invention comprises a crystalline form of a polypeptide corresponding
CC to the catalytic domain of matrix metalloproteinase 9 (MMP9) protein - a
CC gelatinase. The crystalline polypeptide of the invention is useful for
CC treating a metalloproteinase mediated disease or condition in a warm-

CC blooded animal. The crystalline polypeptide is also useful for
CC determining the three-dimensional structure of the MMP9 catalytic domain
CC to high resolution. The three-dimensional structure of the MMP9 catalytic
CC domain is useful for rational drug design, and the atomic coordinates of
CC the catalytic domain of MMP9 are useful for selecting or designing
CC chemical modulators (preferably inhibitors) of MMP9. The crystalline
CC polypeptide of the invention is useful in the treatment of a
CC metalloproteinase mediated disease or condition, such as: tumour growth;
CC metastasis in cancer; arthritis; osteoarthritis; atherosclerosis;
CC restenosis; periodontitis; multiple sclerosis; glomerulonephritis; graft-
CC versus-host disease; and non-insulin dependent diabetes. The present
CC amino acid sequence represents a human matrix metalloproteinase 2 (MMP2)
CC protein
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 56
ABG76322
ID ABG76322 standard; protein; 660 AA.
XX
AC ABG76322;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP-2).
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Example 1; Page 41-42; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. The present sequence represents human MMP-2
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 54; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 100 PRCGNPDVA 108

RESULT 57
ADD18578
ID ADD18578 standard; protein; 660 AA.
XX
AC ADD18578;
XX
DT 15-JAN-2004 (first entry)
XX
DE Human disease related protein SeqID9.
XX
KW human; disease state; cytostatic; antiinflammatory; ophthalmological;
KW antiarteriosclerotic; vulnerary; gene therapy;
KW hypoxia-regulated condition; tumourigenesis; angiogenesis; apoptosis;
KW inflammation; erythropoiesis; glycolysis; gluconeogenesis;
KW glucose transportation; catecholamine synthesis; iron transport;
KW nitric oxide synthesis; cancer; ischaemic condition; reperfusion injury;
KW retinopathy; neonatal stress; pre-eclampsia; atherosclerosis;
KW inflammatory condition; wound healing.
XX
OS Homo sapiens.
XX
PN WO2003018621-A2.
XX
PD 06-MAR-2003.
XX
PF 23-AUG-2002; 2002WO-GB003892.
XX
PR 23-AUG-2001; 2001GB-00020558.
PR 05-OCT-2001; 2001GB-00024037.
XX
PA (OXFO-) OXFORD BIOMEDICA UK LTD.
XX
PI Kingsman SM, White J, Ward NR, Harris RA, Naylor S, Mundy CR;
XX
DR WPI; 2003-290046/28.
DR N-PSDB; ADD18579.
XX
PT New substantially purified polypeptide, useful for diagnosing or treating
PT a hypoxia-regulated condition, such as cancer, ischemia, reperfusion
PT injury, retinopathy, pre-eclampsia, atherosclerosis, inflammation, or
PT wound healing.
XX
PS Claim 25; SEQ ID NO 9; 424pp; English.
XX
CC This invention relates to novel human genes and gene product which are
CC implicated in certain disease states. Compounds which modulate the
CC proteins of the invention may have cytostatic, antiinflammatory,
CC ophthalmological, antiarteriosclerotic or vulnerary activities. The
CC sequences of the invention may be useful for gene therapy. The invention
CC may be useful for diagnosing or treating a hypoxia-regulated condition,
CC such as tumourigenesis, angiogenesis, apoptosis, inflammation,
CC erythropoiesis, or the biological response to hypoxia conditions
CC including processes such as glycolysis, gluconeogenesis, glucose
CC transportation, catecholamine synthesis, iron transport or nitric oxide
CC synthesis. The disease includes cancer, ischaemic conditions, reperfusion
CC injury, retinopathy, neonatal stress, pre-eclampsia, atherosclerosis,
CC inflammatory conditions or wound healing. The present sequence is that of
CC a disease related protein of the invention.
XX
SQ Sequence 660 AA;

```
  Query Match           100.0%;  Score 54;  DB 7;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 58
ADP65244
ID   ADP65244 standard; protein; 660 AA.
XX
AC   ADP65244;
XX
DT   12-AUG-2004  (first entry)
XX
DE   Human matrix metalloproteinase 2 preproprotein, gelatinase A, 72kD type.
XX
KW   autoimmune disease; arthritide; gene expression analysis;
KW   rheumatoid arthritis; collagen-induced; immunosuppressive; antirheumatic;
KW   antiarthritic; osteopathic; antigout; antiinflammatory; dermatological;
KW   immunomodulatory; lupus; ankylosing spondylitis; Fibrositis;
KW   fibromyalgia; osteoarthritis; gout; juvenile rheumatoid arthritis;
KW   immune; human.
XX
OS   Homo sapiens.
XX
PN   WO2003072827-A1.
XX
PD   04-SEP-2003.
XX
PF   31-OCT-2002; 2002WO-US035433.
XX
PR   31-OCT-2001; 2001US-0336220P.
XX
PA   (CHIL-) CHILDREN'S HOSPITAL MEDICAL CENT.
XX
PI   Hirsch R,  Thorton SL;
XX
DR   WPI; 2003-712740/67.
DR   GENBANK; NP_004521.
XX
PT   Diagnosing and analyzing autoimmune disease using gene expression
PT   profiles and microarray technology, useful for diagnosing and treating
PT   rheumatoid arthritis, lupus, fibrositis, osteoarthritis, fibromyalgia and
PT   gout.
XX
PS   Disclosure; Page; 56pp; English.
XX
CC   The invention relates to a novel method for diagnosing and analysing
CC   autoimmunc disease or arthritides. The method comprises obtaining a
CC   patient sample containing mRNA, analysing gene expression using the mRNA
CC   that results in a gene expression signature of the mRNA, and using that
CC   gene expression signature to diagnose or analyse the autoimmune disease
CC   or arthritides in the patient, where gene expression of at least 60% of
CC   the genes correlates with that of the gene signature. The invention
CC   further comprises: a treatment of rheumatoid arthritis; identification of
CC   genes for targeting in the treatment of rheumatoid arthritis in a mammal
CC   other than a mouse; diagnosis of rheumatoid arthritis in a mammal; an
CC   array or gene chip, specific for rheumatoid arthritis; diagnosis or
CC   analyses of autoimmune disease or rheumatoid arthritis; screening the
CC   efficacy of a candidate drug in vitro for the treatment of collagen-
CC   induced arthritis; and reducing the symptoms associated with collagen-
CC   induced arthritis. The compositions of the invention have the following
CC   activities: immunosuppressive, antirheumatic, antiarthritic, osteopathic,
CC   antigout, antiinflammatory, dermatological, and immunomodulatory. The
CC   methods and compositions of the present invention are useful for
CC   diagnosing and treating autoimmune disease or arthritides, such as
CC   rheumatoid arthritis, lupus, ankylosing spondylitis, fibrositis,
CC   fibromyalgia, osteoarthritis, gout, juvenile rheumatoid arthritis, and an
CC   immune disease caused by an infectious agent. This sequence represents a
CC   protein sequence relating to the genes used in the analysis and treatment
CC   of autoimmune diseases or arthritides. Note: This sequence is not shown
CC   in the specification. It has been supplied in an electronic format from
CC   WIPO.
XX
SQ   Sequence 660 AA;

  Query Match           100.0%;  Score 54;  DB 7;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 59
ADN07697
ID   ADN07697 standard; protein; 660 AA.
XX
AC   ADN07697;
XX
DT   01-JUL-2004  (first entry)
XX
DE   Human matrix matalloproteinase 2 protein.
XX
KW   Protease; stem cell; bone marrow failure disorder; aplastic anaemia;
KW   myeloproliferative disorder; multiple myeloma; gene therapy; human;
KW   matrix metalloproteinase; MMP; enzyme.
XX
OS   Homo sapiens.
XX
PN   US2004071687-A1.
XX
PD   15-APR-2004.
XX
PF   28-MAY-2003; 2003US-00447315.
XX
PR   28-MAY-2002; 2002US-0383658P.
XX
PA   (RAFI/) RAFII S.
PA   (HEIS/) HEISSIG B.
PA   (HATT/) HATTORI K.
XX
PI   Rafii S,  Heissig B,  Hattori K;
XX
DR   WPI; 2004-328523/30.
DR   N-PSDB; ADN07698.
DR   GENBANK; 11342666.
XX
PT   Recruiting adult stem cells in an animal for treating aplastic anemia or
PT   multiple myeloma by administering a protease or its activator so that the
PT   stem cells can proliferate, self-renew, differentiate or mobilize to a
PT   target site.
XX
PS   Disclosure; SEQ ID NO 3; 77pp; English.
XX
CC   The present invention relates to the use of proteases to recruit stem
CC   cells from the niches they normally occupy. The invention is useful for
CC   recruiting adult stem cells for treating bone marrow failure disorder
CC   such as aplastic anaemia and myeloproliferative disorder such as multiple
CC   myeloma. The invention is also useful in gene therapy. The present
CC   sequence is human matrix metalloproteinase (MMP) protein.
XX
SQ   Sequence 660 AA;

  Query Match           100.0%;  Score 54;  DB 8;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

```
RESULT 60
ADQ17097
ID   ADQ17097 standard; protein; 660 AA.
XX
AC   ADQ17097;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP2) protein.
XX
KW   Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW   human; matrix metalloproteinase; MMP.
XX
OS   Homo sapiens.
XX
PN   US2004127421-A1.
XX
PD   01-JUL-2004.
XX
PF   30-DEC-2002; 2002US-00335207.
XX
PR   30-DEC-2002; 2002US-00335207.
XX
PA   (MALI/) MALIK S.
PA   (QUIR/) QUIRK S.
XX
PI   Malik S,  Quirk S;
XX
DR   WPI; 2004-506456/48.
XX
PT   Composition used for preventing and treating wrinkles and treating wounds
PT   comprises peptide having sequence related to matrix metalloproteinase
PT   proenzyme.
XX
PS   Example 1; SEQ ID NO 14; 60pp; English.
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase-2 (MMP2) protein. This sequence is used in the
CC   exemplification of the invention.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 61
ADV90301
ID   ADV90301 standard; protein; 660 AA.
XX
AC   ADV90301;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Protease-hydrolysed polypeptide #78.
XX
KW   Protease; immune disorder; inflammation; musculoskeletal disease;
KW   dermatological disease; gastrointestinal disease; endocrine disease;
KW   metabolic disorder; cancer; hematological disease;
KW   cardiovascular disease; neurological disease; neurodegenerative disease;
KW   growth disorder; respiratory disease; genitourinary disease;
KW   gynecological disorder; nutritional disorder; infection; cytostatic;
KW   gastrointestinal-gen.; antiinflammatory; antiasthmatic; analgesic;
KW   antiarthritic; osteopathic; antidiabetic; nephrotropic;
KW   cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipsoriatic;
KW   antiallergic; dermatological; enzyme; hydrolysis.
XX
OS   Homo sapiens.
XX
PN   WO2004113522-A1.
XX
PD   29-DEC-2004.
XX
PF   18-JUN-2004; 2004WO-EP051173.
XX
PR   18-JUN-2003; 2003EP-00013819.
PR   10-NOV-2003; 2003EP-00025851.
PR   11-NOV-2003; 2003EP-00025871.
PR   11-FEB-2004; 2004EP-00003058.
XX
PA   (DIRE-) DIREVO BIOTECH AG.
XX
PI   Haupts U,  Koltermann A,  Scheidig A,  Voetsmeier C,  Kettling U;
XX
DR   WPI; 2005-057985/06.
XX
PT   Proteases with defined specificity for a target substrate useful for
PT   treating a specific disease related to the target substrate, such as
PT   cancer, asthma, diabetes, inflammatory disorders and psoriasis.
XX
PS   Claim 43; SEQ ID NO 131; 250pp; English.
XX
CC   The invention relates to the use of a protease with defined specificity
CC   for a target substrate for preparing a medicament for the treatment of a
CC   specific disease related to the target substrate. The invention also
CC   relates to a pharmaceutical or diagnostic composition comprising one or
CC   more enzymes in the use cited, optionally comprising pharmaceutically or
CC   diagnostically acceptable carriers, excipients and/or auxiliary agents, a
CC   method for cleaving a target substrate in vivo or in vitro comprising
CC   contacting the target substrate with a protease as cited in the use
CC   mentioned, and a method for treatment of a disease in a patient connected
CC   with a specific target substrate comprising administering to the patient
CC   a protease with defined specificity for the specific target substrate.
CC   The protease hydrolyzes the target substrate and eliminates or reduces
CC   one or more biological activities, physico-chemical properties or
CC   pharmacological properties of the target protein and/or activates or
CC   increases one or more biological activities, physico-chemical properties
CC   or pharmacological properties of the target protein, and/or adds one or
CC   more biological activities, physico-chemical properties or
CC   pharmacological properties to the target protein. The protease may be
CC   administered to treat immune disorders, inflammatory disorders,
CC   musculoskeletal diseases, dermatological diseases, gastrointestinal
CC   diseases, endocrine diseases, metabolic disorder, cancers, hematological
CC   diseases, cardiovascular diseases, neurological diseases,
CC   neurodegenerative diseases, growth disorders, respiratory diseases,
CC   genitourinary diseases, gynecological disorders, nutritional disorders
CC   and infections. This sequence represents a polypeptide hydrolysed by a
CC   protease used in the scope of the invention.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 54;  DB 9;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 62
ADV68478
ID   ADV68478 standard; protein; 660 AA.
XX
```

```
AC   ADV68478;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 protein SeqID14.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW   metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW   metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW   metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW   metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW   metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW   metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW   metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS   Homo sapiens.
XX
PN   US2004259802-A1.
XX
PD   23-DEC-2004.
XX
PF   20-JUN-2003; 2003US-00601059.
XX
PR   20-JUN-2003; 2003US-00601059.
XX
PA   (YANG/) YANG S.
PA   (QUIR/) QUIRK S.
XX
PI   Yang S,  Quirk S;
XX
DR   WPI; 2005-047374/05.
XX
PT   A composition for decreasing and inhibiting the growth of chondrosarcoma
PT   cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT   matrix metalloproteinase inhibitor.
XX
PS   Example 1; SEQ ID NO 14; 50pp; English.
XX
CC   This invention relates to a novel composition for inhibiting growth of
CC   chondrosarcoma cells comprising an amount of a peptide and a
CC   pharmaceutical carrier. The invention may be useful for the production of
CC   compounds with a cytostatic activity acting as metalloprotease 1
CC   inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC   metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC   metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC   metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC   metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC   metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC   metalloprotease inhibitors. The composition is useful for decreasing and
CC   inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC   growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC   treating chondrosarcomas and bone cancers. The present sequence is that
CC   of a human matrix metalloproteinase which may be used during the
CC   development of a composition of the invention.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 54;  DB 9;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 63
ADE62857
ID   ADE62857 standard; protein; 662 AA.
XX
AC   ADE62857;
XX
DT   29-JAN-2004  (first entry)
XX
DE   Rat Protein P33436, SEQ ID NO 8791.
XX
KW   Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW   chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
OS   Rattus norvegicus.
XX
PN   WO2003016475-A2.
XX
PD   27-FEB-2003.
XX
PF   14-AUG-2002; 2002WO-US025765.
XX
PR   14-AUG-2001; 2001US-0312147P.
PR   01-NOV-2001; 2001US-0346382P.
PR   26-NOV-2001; 2001US-0333347P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
PA   (FARB ) BAYER AG.
XX
PI   Woolf C,  D'urso D,  Befort K,  Costigan M;
XX
DR   WPI; 2003-268312/26.
DR   GENBANK; P33436.
XX
PT   New composition comprising two or more isolated polypeptides, useful for
PT   preparing a medicament for treating pain in an animal.
XX
PS   Claim 1; Page; 1017pp; English.
XX
CC   The invention discloses a composition comprising two or more isolated rat
CC   or human polynucleotides or a polynucleotide which represents a fragment,
CC   derivative or allelic variation of the nucleic acid sequence. Also
CC   claimed are a vector comprising the novel polynucleotide, a host cell
CC   comprising the vector, a method for identifying a nucleotide sequence
CC   which is differentially regulated in an animal subjected to pain and a
CC   kit to perform the method, an array, a method for identifying an agent
CC   that increases or decreases the expression of the polynucleotide sequence
CC   that is differentially expressed in neuronal tissue of a first animal
CC   subjected to pain, a method for identifying a compound which regulates
CC   the expression of a polynucleotide sequence which is differentially
CC   expressed in an animal subjected to pain, a method for identifying a
CC   compound that regulates the activity of one or more of the
CC   polynucleotides, a method for producing a pharmaceutical composition, a
CC   method for identifying a compound or small molecule that regulates the
CC   activity in an animal of one or more of the polypeptides given in the
CC   specification, a method for identifying a compound useful in treating
CC   pain and a pharmaceutical composition comprising the one or more
CC   polypeptides or their antibodies. The polynucleotide or the compound that
CC   modulates its activity is useful for preparing a medicament for treating
CC   pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC   injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC   therapy). The sequence presented is a rat protein (shown in Table 2 of
CC   the specification) which is differentially expressed during pain. Note:
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic form directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 662 AA;

  Query Match             100.0%;  Score 54;  DB 7;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 64
ADD46270
ID   ADD46270 standard; protein; 662 AA.
```

```
XX
AC   ADD46270;
XX
DT   29-JAN-2004  (first entry)
XX
DE   Rat Protein P33436, SEQ ID NO 11945.
XX
KW   Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW   chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
OS   Rattus norvegicus.
XX
PN   WO2003016475-A2.
XX
PD   27-FEB-2003.
XX
PF   14-AUG-2002; 2002WO-US025765.
XX
PR   14-AUG-2001; 2001US-0312147P.
PR   01-NOV-2001; 2001US-0346382P.
PR   26-NOV-2001; 2001US-0333347P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
PA   (FARB ) BAYER AG.
XX
PI   Woolf C,  D'urso D,  Befort K,  Costigan M;
XX
DR   WPI; 2003-268312/26.
DR   GENBANK; P33436.
XX
PT   New composition comprising two or more isolated polypeptides, useful for
PT   preparing a medicament for treating pain in an animal.
XX
PS   Claim 1; Page; 1017pp; English.
XX
CC   The invention discloses a composition comprising two or more isolated rat
CC   or human polynucleotides or a polynucleotide which represents a fragment,
CC   derivative or allelic variation of the nucleic acid sequence. Also
CC   claimed are a vector comprising the novel polynucleotide, a host cell
CC   comprising the vector, a method for identifying a nucleotide sequence
CC   which is differentially regulated in an animal subjected to pain and a
CC   kit to perform the method, an array, a method for identifying an agent
CC   that increases or decreases the expression of the polynucleotide sequence
CC   that is differentially expressed in neuronal tissue of a first animal
CC   subjected to pain, a method for identifying a compound which regulates
CC   the expression of a polynucleotide sequence which is differentially
CC   expressed in an animal subjected to pain, a method for identifying a
CC   compound that regulates the activity of one or more of the
CC   polynucleotides, a method for producing a pharmaceutical composition, a
CC   method for identifying a compound or small molecule that regulates the
CC   activity in an animal of one or more of the polypeptides given in the
CC   specification, a method for identifying a compound useful in treating
CC   pain and a pharmaceutical composition comprising the one or more
CC   polypeptides or their antibodies. The polynucleotide or the compound that
CC   modulates its activity is useful for preparing a medicament for treating
CC   pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC   injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC   therapy). The sequence presented is a rat protein (shown in Table 2 of
CC   the specification) which is differentially expressed during pain. Note:
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic form directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 662 AA;

  Query Match             100.0%;  Score 54;  DB 7;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

```
RESULT 65
AAW41111
ID   AAW41111 standard; protein; 663 AA.
XX
AC   AAW41111;
XX
DT   08-JUN-1998  (first entry)
XX
DE   Chicken matrix metalloproteinase-2.
XX
KW   Matrix metalloproteinase-2; MMP-2; chMMP-2; chicken; Angiogenesis;
KW   inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor;
KW   rheumatoid arthritis; tumour; metastasis; diabetic retinopathy;
KW   macular degeneration; restenosis; therapy.
XX
OS   Gallus sp.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Sig_peptide
XX
PN   WO9745137-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009158.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA;
XX
DR   WPI; 1998-032334/03.
DR   N-PSDB; AAV03995.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta3
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Page 163-167; 234pp; English.
XX
CC   This protein sequence comprises chicken matrix metalloproteinase-2 (chMMP
CC   -2). The invention relates to the discovery that angiogenesis is mediated
CC   by the specific vitronectin receptor alpha-v beta-3, and that inhibition
CC   of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of
CC   alpha-v beta-3 include C-terminal fragments (see AAW41083-94) of human or
CC   chicken MMP-2. An MMP-2 fragment can be obtained by recombinant DNA
CC   methods, such as PCR amplification of the chMMP-2 coding region, cloning
CC   into e.g. pGEX-3X, and expression in E. coli as a fusion protein with
CC   glutathione-S-transferases. The antagonists can be used to inhibit
CC   angiogenesis in inflammed tissue (for treatment of arthritis or
CC   rheumatoid arthritis), in solid tumours or metastases (particularly to
CC   induce regression or inhibit tumour growth), and in ocular disorders such
CC   as diabetic retinopathy and macular degeneration, as well as to treat
CC   restenosis (all claimed)
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 54;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 2.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 66
ADT05976
ID   ADT05976 standard; protein; 663 AA.
```

```
XX
AC   ADT05976;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #1, SEQ ID NO:30.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Asp-Ser-His-Phe in the chicken
FT                   MMP-2 shown in figure 7"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
DR   N-PSDB; ADT05975.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; SEQ ID NO 30; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents chicken matrix metalloprotease 2
CC   (MMP-2, gelatinase) used in an example of the invention. Note: The
CC   present sequence differs between residues 202-205 compared to the
CC   sequence also described as chicken MMP-2 shown in figure 7A-7C
CC   (ADT05995).
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 2.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 67
ADT05995
ID   ADT05995 standard; protein; 663 AA.
XX
AC   ADT05995;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #2.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Ser-His-Phe-Asp in the chicken
FT                   MMP-2 shown in SEQ ID NO:30"
FT   Misc-difference 202
FT                   /note= "Encoded by TCC"
FT   Misc-difference 203
FT                   /note= "Encoded by CAT"
FT   Misc-difference 204
FT                   /note= "Encoded by TTT"
FT   Misc-difference 205
FT                   /note= "Encoded by GAT"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
```

```
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
DR   N-PSDB; ADT05994.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents chicken matrix metalloprotease 2
CC   (MMP-2, gelatinase) used in an example of the invention. Note: The
CC   present sequence differs between residues 202-205 compared to the
CC   sequence also described as chicken MMP-2 shown in the sequence listing
CC   (ADT05976)
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 54;  DB 8;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 2.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 68
ADF60554
ID   ADF60554 standard; protein; 708 AA.
XX
AC   ADF60554;
XX
DT   12-FEB-2004  (first entry)
XX
DE   Human contig polypeptide sequence SEQ ID NO:2921.
XX
KW   biological activity; genetic engineering; hybridisation probe; oligomer;
KW   primer; chromosome mapping; gene mapping; recombinant protein production;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO2003080795-A2.
XX
PD   02-OCT-2003.
XX
PF   09-AUG-2002; 2002WO-US025485.
XX
PR   09-AUG-2001; 2001US-0311261P.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Yang Y,  Wang Z,  Weng G,  Ma Y;
XX
DR   WPI; 2003-876918/81.
DR   N-PSDB; ADF60102.
XX
PT   New polynucleotides, useful as hybridization probes, oligomers or
PT   primers, for chromosome or gene mapping, for the recombinant production
PT   of proteins, and for generating antisense DNA or RNA.
XX
PS   Example 3; SEQ ID NO 2921; 571pp; English.
XX
CC   The present invention describes isolated polynucleotide sequences (I),
CC   which encode polypeptides (II) with biological activity. Also described:
CC   (1) a vector comprising (I); (2) an expression vector comprising (I); (3)
CC   a host cell genetically engineered to comprise (I) which is operatively
CC   associated with a regulatory sequence that modulates expression of (I) in
CC   the host cell; (4) a polypeptide (II) encoded by (I); (5) a composition
CC   comprising the polypeptide of (4) and a carrier; (6) an antibody directed
CC   against the polypeptide of (4); (7) detecting (I) or the polypeptide of
CC   (4) in a sample; (8) identifying a compound that binds to the polypeptide
CC   of (4); (9) producing the polypeptide of (4); and (10) a collection of
CC   polynucleotides comprising at least one of the polynucleotide sequences
CC   (I). The polynucleotides (I) can be used as hybridisation probes,
CC   oligomers or primers, for chromosome or gene mapping, for the recombinant
CC   production of proteins, and for generating antisense DNA or RNA. The
CC   present sequence represents a human contig polypeptide sequence, which is
CC   used in an example from the present invention.
XX
SQ   Sequence 708 AA;

  Query Match             100.0%;  Score 54;  DB 7;  Length 708;
  Best Local Similarity   100.0%;  Pred. No. 2.6;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        148 PRCGNPDVA 156


RESULT 69
AEA20970
ID   AEA20970 standard; protein; 708 AA.
XX
AC   AEA20970;
XX
DT   11-AUG-2005  (first entry)
XX
DE   Novel human polypeptide SEQ ID NO 1664.
XX
KW   vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW   DNA purification; protein purification; osteoarthritis; antiarthritic;
KW   osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;
KW   periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW   peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW   degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW   cerebrovascular ischemia; cerebroprotective; vasotropic;
KW   cardiovascular disease; autoimmune disease; immunosuppressive;
KW   immune disorder; viral infection; virucide; infection; cancer;
KW   cytostatic; neoplasm.
XX
```

OS Homo sapiens.
XX
PN WO2005049806-A2.
XX
PD 02-JUN-2005.
XX
PF 11-MAR-2004; 2004WO-US007412.
XX
PR 14-MAR-2003; 2003US-00389559.
XX
PA (NUVE-) NUVELO INC.
XX
PI Tang TY, Wang J, Wang ZW, Zhang J, Ren F, Zhou P, Ma Y;
PI Ghosh M, Xue A, Asundi V, Zhao Q, Wang D, Goodrich R, Chen R;
PI Wehrman T, Weng G, Boyle B;
XX
DR WPI; 2005-417730/42.
XX
PT New polynucleotide encoding a polypeptide with biological activity,
PT useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT CNS and peripheral disease, stroke, autoimmune disorders, viral
PT infection, or cancer.
XX
PS Example 3; SEQ ID NO 1664; 500pp; English.
XX
CC The invention describes a new isolated polynucleotide (I) encoding a
CC polypeptide with biological activity comprising: a nucleotide sequence of
CC SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC to the sequence of (i) under stringent hybridization conditions; or a
CC nucleotide sequence having greater than 99% sequence identity with the
CC sequence of (i). Also described are: a(n) (expression)vector comprising
CC (I); a host cell genetically engineered to comprise (I) operatively,
CC associated with a regulatory sequence that modulates expression of the
CC polynucleotide in the host cell; an isolated polypeptide comprising a
CC sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC polynucleotide hybridizing under stringent conditions with any one of SEQ
CC ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC carrier; an antibody directed against the polypeptide of (3); a method
CC for detecting (I) in a sample; a method for detecting the polypeptide of
CC (3) in a sample; a method for identifying a compound that binds to the
CC polypeptide of (3); a method of producing the polypeptide of (3); and a
CC collection of polynucleotides, where the collection comprising of at
CC least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC 568-1134. All sequences are fully defined in the specification. The
CC sequences and methods are useful in diagnostics, forensic, and gene
CC mapping, in identifying of mutations responsible for genetic disorders or
CC other traits, in assessing biodiversity, and for producing many other
CC types of data and products dependent on DNA and amino acid sequences. The
CC composition and method are useful for treating a disease or disorder,
CC e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC autoimmune disorders, viral infection, or cancer. This is the amino acid
CC sequence of a novel polypeptide of the invention.
XX
SQ Sequence 708 AA;

Query Match 100.0%; Score 54; DB 9; Length 708;
Best Local Similarity 100.0%; Pred. No. 2.6;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 148 PRCGNPDVA 156

RESULT 70
ABG23999
ID ABG23999 standard; protein; 1330 AA.
XX
AC ABG23999;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #23990.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US008631.
XX
PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR N-PSDB; AAS88186.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
PS Claim 20; SEQ ID NO 54358; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC amino acid sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 1330 AA;

Query Match 100.0%; Score 54; DB 4; Length 1330;
Best Local Similarity 100.0%; Pred. No. 4.9;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 318 PRCGNPDVA 326

Search completed: February 21, 2006, 18:13:21
Job time : 91.2807 secs

Ø Meth's
APP

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:00:29 ; Search time 20.6053 Seconds
(without alignments)
36.111 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	9	2	US-10-153-185-12	Sequence 12, Appl
2	54	100.0	19	2	US-10-153-185-11	Sequence 11, Appl
3	54	100.0	43	2	US-10-153-185-15	Sequence 15, Appl
4	54	100.0	44	2	US-10-153-185-2	Sequence 2, Appli
5	54	100.0	631	2	US-08-448-489-17	Sequence 17, Appl
6	54	100.0	631	2	US-09-689-730-17	Sequence 17, Appl
7	54	100.0	660	2	US-08-704-711A-18	Sequence 18, Appl
8	54	100.0	660	2	US-09-521-220-18	Sequence 18, Appl
9	54	100.0	660	2	US-09-391-104-19	Sequence 19, Appl
10	54	100.0	660	2	US-09-917-254-89	Sequence 89, Appl
11	54	100.0	660	2	US-09-949-016-6512	Sequence 6512, Ap
12	54	100.0	660	2	US-09-949-016-7937	Sequence 7937, Ap
13	54	100.0	660	2	US-10-153-185-14	Sequence 14, Appl
14	54	100.0	663	2	US-09-194-468A-30	Sequence 30, Appl
15	47	87.0	136	2	US-09-513-999C-4639	Sequence 4639, Ap
16	45	83.3	9	2	US-09-492-543-167	Sequence 167, App
17	45	83.3	9	2	US-10-172-597-167	Sequence 167, App
18	45	83.3	43	2	US-10-153-185-17	Sequence 17, Appl
19	45	83.3	54	2	US-10-153-185-9	Sequence 9, Appli
20	45	83.3	56	2	US-10-153-185-4	Sequence 4, Appli
21	45	83.3	135	2	US-09-513-999C-4163	Sequence 4163, Ap
22	45	83.3	264	2	US-09-009-156-6	Sequence 6, Appli
23	45	83.3	264	2	US-09-372-154-6	Sequence 6, Appli
24	45	83.3	264	2	US-09-950-688-6	Sequence 6, Appli
25	45	83.3	267	2	US-08-448-489-18	Sequence 18, Appl
26	45	83.3	267	2	US-09-391-104-27	Sequence 27, Appl
27	45	83.3	267	2	US-09-689-730-18	Sequence 18, Appl
28	45	83.3	271	2	US-08-896-062-2	Sequence 2, Appli
29	45	83.3	277	2	US-09-949-016-8131	Sequence 8131, Ap
30	45	83.3	469	2	US-08-704-711A-16	Sequence 16, Appl
31	45	83.3	469	2	US-08-448-489-12	Sequence 12, Appl
32	45	83.3	469	2	US-09-521-220-16	Sequence 16, Appl
33	45	83.3	469	2	US-09-391-104-23	Sequence 23, Appl
34	45	83.3	469	2	US-09-949-016-6223	Sequence 6223, Ap
35	45	83.3	469	2	US-09-689-730-12	Sequence 12, Appl
36	45	83.3	491	2	US-09-949-016-10875	Sequence 10875, A
37	41	75.9	8	2	US-08-994-689C-4	Sequence 4, Appli
38	41	75.9	8	2	US-10-153-185-1	Sequence 1, Appli
39	41	75.9	9	2	US-09-492-543-113	Sequence 113, App
40	41	75.9	9	2	US-09-492-543-134	Sequence 134, App
41	41	75.9	9	2	US-10-172-597-113	Sequence 113, App
42	41	75.9	9	2	US-10-172-597-134	Sequence 134, App
43	41	75.9	50	2	US-10-153-185-3	Sequence 3, Appli
44	41	75.9	54	2	US-10-153-185-5	Sequence 5, Appli
45	41	75.9	54	2	US-10-153-185-7	Sequence 7, Appli

ALIGNMENTS

RESULT 1
US-10-153-185-12
; Sequence 12, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 9
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-12

Query Match 100.0%; Score 54; DB 2; Length 9;
Best Local Similarity 100.0%; Pred. No. 4.6e+05;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 1 PRCGNPDVA 9

RESULT 2
US-10-153-185-11
; Sequence 11, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11

```
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-11

  Query Match            100.0%;  Score 54;  DB 2;  Length 19;
  Best Local Similarity  100.0%;  Pred. No. 0.0078;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 3
US-10-153-185-15
; Sequence 15, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-15

  Query Match            100.0%;  Score 54;  DB 2;  Length 43;
  Best Local Similarity  100.0%;  Pred. No. 0.018;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 4
US-10-153-185-2
; Sequence 2, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match            100.0%;  Score 54;  DB 2;  Length 44;
  Best Local Similarity  100.0%;  Pred. No. 0.019;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 5
US-08-448-489-17
; Sequence 17, Application US/08448489
; Patent No. 6184022
; GENERAL INFORMATION:
;  APPLICANT: SEIKI, Motoharu
;  APPLICANT: SATO, Hiroshi
;  APPLICANT: SHINAGAWA, Akira
;  TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
;  FILE REFERENCE: 55-290P
;  CURRENT APPLICATION NUMBER: US/08/448,489
;  CURRENT FILING DATE: 1995-06-07
;  NUMBER OF SEQ ID NOS: 19
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
;   LENGTH: 631
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Known Member of
;   OTHER INFORMATION: Matrix Metalloproteinase Family
US-08-448-489-17

  Query Match            100.0%;  Score 54;  DB 2;  Length 631;
  Best Local Similarity  100.0%;  Pred. No. 0.29;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 6
US-09-689-730-17
; Sequence 17, Application US/09689730
; Patent No. 6825024
; GENERAL INFORMATION:
;  APPLICANT: SEIKI, Motoharu
;  APPLICANT:  SATO, Hiroshi
;  APPLICANT:  SHINAGAWA, Akira
;  TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
;  FILE REFERENCE: 55-290P
;  CURRENT APPLICATION NUMBER: US/09/689,730
;  CURRENT FILING DATE:  2000-10-13
;  PRIOR APPLICATION NUMBER: US/08/448,489
;  PRIOR FILING DATE: 1995-06-07
;  NUMBER OF SEQ ID NOS: 19
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
;   LENGTH: 631
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Known Member of
;   OTHER INFORMATION: Matrix Metalloproteinase Family
US-09-689-730-17

  Query Match            100.0%;  Score 54;  DB 2;  Length 631;
  Best Local Similarity  100.0%;  Pred. No. 0.29;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 7
US-08-704-711A-18
```

```
; Sequence 18, Application US/08704711A
; Patent No. 6114159
; GENERAL INFORMATION:
;   APPLICANT:  WILL, Horst
;   APPLICANT:  HINZMANN, Bernd
;   TITLE OF INVENTION:  DNA SEQUENCES FOR MATRIX
;   TITLE OF INVENTION:  METALLOPROTEASES, THEIR PRODUCTION AND USE
;   NUMBER OF SEQUENCES:  22
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE:  Foley & Lardner
;     STREET:  3000 K Street, N.W., Suite 500
;     CITY:  Washington
;     STATE:  D.C.
;     COUNTRY:  USA
;     ZIP:  20007-5109
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE:  Floppy disk
;     COMPUTER:  IBM PC compatible
;     OPERATING SYSTEM:  PC-DOS/MS-DOS
;     SOFTWARE:  PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER:  US/08/704,711A
;     FILING DATE:  20-NOV-1996
;     CLASSIFICATION:  435
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  WO PCT/DE95/00357
;     FILING DATE:  17-MAR-1995
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  DE 4438838.1
;     FILING DATE:  21-OCT-1994
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  DE 4409663.1
;     FILING DATE:  17-MAR-1994
;   ATTORNEY/AGENT INFORMATION:
;     NAME:  GRANADOS, Patricia D.
;     REGISTRATION NUMBER:  33,683
;     REFERENCE/DOCKET NUMBER:  26083/124
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE:  (202)672-5300
;     TELEFAX:  (202)672-5399
;     TELEX:  904136
; INFORMATION FOR SEQ ID NO:  18:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH:  660 amino acids
;     TYPE:  amino acid
;     STRANDEDNESS:  single
;     TOPOLOGY:  linear
US-08-704-711A-18

  Query Match             100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 8
US-09-521-220-18
; Sequence 18, Application US/09521220
; Patent No. 6399348
;  GENERAL INFORMATION:
;      APPLICANT: WILL, Horst
;                 HINZMANN, Bernd
;      TITLE OF INVENTION: DNA SEQUENCES FOR MATRIX
;                          METALLOPROTEASES, THEIR PRODUCTION AND USE
;      NUMBER OF SEQUENCES: 22
;      CORRESPONDENCE ADDRESS:
;           ADDRESSEE: Foley & Lardner
;           STREET: 3000 K Street, N.W., Suite 500
;           CITY: Washington
;           STATE: D.C.
;           COUNTRY: USA
;           ZIP: 20007-5109
;      COMPUTER READABLE FORM:
;           MEDIUM TYPE: Floppy disk
;           COMPUTER: IBM PC compatible
;           OPERATING SYSTEM: PC-DOS/MS-DOS
;           SOFTWARE: PatentIn Release #1.0, Version #1.30
;      CURRENT APPLICATION DATA:
;           APPLICATION NUMBER: US/09/521,220
;           FILING DATE: 08-Mar-2000
;           CLASSIFICATION: <Unknown>
;                           21-OCT-1994
;                           17-MAR-1994
;      PRIOR APPLICATION DATA:
;           APPLICATION NUMBER: 08/704,711
;           FILING DATE: <Unknown>
;           APPLICATION NUMBER: DE 4438838.1
;           FILING DATE: 21-OCT-1994
;           APPLICATION NUMBER: DE 4409663.1
;           FILING DATE: 17-MAR-1994
;      ATTORNEY/AGENT INFORMATION:
;           NAME: GRANADOS, Patricia D.
;           REGISTRATION NUMBER: 33,683
;           REFERENCE/DOCKET NUMBER: 26083/124
;      TELECOMMUNICATION INFORMATION:
;           TELEPHONE: (202)672-5300
;           TELEFAX: (202)672-5399
;           TELEX: 904136
;  INFORMATION FOR SEQ ID NO: 18:
;      SEQUENCE CHARACTERISTICS:
;           LENGTH: 660 amino acids
;           TYPE: amino acid
;           STRANDEDNESS: single
;           TOPOLOGY: linear
;      SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-521-220-18

  Query Match             100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 9
US-09-391-104-19
; Sequence 19, Application US/09391104
; Patent No. 6399371
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match             100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
```

```
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 10
US-09-917-254-89
; Sequence 89, Application US/09917254
; Patent No. 6703204
; GENERAL INFORMATION:
;  APPLICANT: Mutter, George
;  APPLICANT:  Baak, Jan
;  TITLE OF INVENTION: Prognostic Classification of Breast Cancer
;  FILE REFERENCE: B0801/7224(JRV)
;  CURRENT APPLICATION NUMBER: US/09/917,254
;  CURRENT FILING DATE:  2001-07-27
;  PRIOR APPLICATION NUMBER: US 60/222,093
;  PRIOR FILING DATE: 2000-07-28
;  NUMBER OF SEQ ID NOS: 102
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 89
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-09-917-254-89

  Query Match            100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 11
US-09-949-016-6512
; Sequence 6512, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6512
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-6512

  Query Match            100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 12
US-09-949-016-7937
; Sequence 7937, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7937
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-7937

  Query Match            100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 13
US-10-153-185-14
; Sequence 14, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match            100.0%;  Score 54;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 14
US-09-194-468A-30
; Sequence 30, Application US/09194468A
; Patent No. 6500924
; GENERAL INFORMATION:
;  APPLICANT:  Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION:  METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
```

```
;  FILE REFERENCE:  MER0049S
;  CURRENT APPLICATION NUMBER: US/09/194,468A
;  CURRENT FILING DATE:  1999-03-23
;  PRIOR APPLICATION NUMBER:  60/018,773
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  60/015,896
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  PCT/US97/09158
;  PRIOR FILING DATE:  1997-05-30
;  NUMBER OF SEQ ID NOS:  45
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-09-194-468A-30

  Query Match           100.0%;  Score 54;  DB 2;  Length 663;
  Best Local Similarity  100.0%;  Pred. No. 0.31;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 15
US-09-513-999C-4639
; Sequence 4639, Application US/09513999C
; Patent No. 6783961
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Duclert, A.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
; Patent No. 6783961
;  FILE REFERENCE: 59.US2.REG
;  CURRENT APPLICATION NUMBER: US/09/513,999C
;  CURRENT FILING DATE:  2000-02-24
;  PRIOR APPLICATION NUMBER: US 60/122,487
;  PRIOR FILING DATE: 1999-02-26
;  NUMBER OF SEQ ID NOS: 36681
;  SOFTWARE: Patent.pm
; SEQ ID NO 4639
;   LENGTH: 136
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -29..-1
;   OTHER INFORMATION: score 11.4
;   OTHER INFORMATION: seq LCLLGCLLSHAAA/AP
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 16
;   OTHER INFORMATION: Xaa=Lys or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 17
;   OTHER INFORMATION: Xaa=Asp or Val
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 19
;   OTHER INFORMATION: Xaa=Glu or Lys
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 22
;   OTHER INFORMATION: Xaa=Leu or Val
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 26
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 27
;   OTHER INFORMATION: Xaa=Ile or Asn or Ser or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 33
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 34
;   OTHER INFORMATION: Xaa=Glu or Lys
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 66
;   OTHER INFORMATION: Xaa=Asp or Glu
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 67
;   OTHER INFORMATION: Xaa=Ala or Pro or Ser or Thr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 75
;   OTHER INFORMATION: Xaa=Lys or Asn
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 80
;   OTHER INFORMATION: Xaa=Lys or Asn or Arg or Ser
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 88
;   OTHER INFORMATION: Xaa=Ala or Cys or Asp or Phe or Gly or His or Ile or Leu or Asn o
;   OTHER INFORMATION: Tyr
;   FEATURE:
;   NAME/KEY: UNSURE
;   LOCATION: 104
;   OTHER INFORMATION: Xaa=Ala or Pro
US-09-513-999C-4639

  Query Match           87.0%;  Score 47;  DB 2;  Length 136;
  Best Local Similarity  88.9%;  Pred. No. 0.92;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db        100 PRCGXPDVA 108


Search completed: February 21, 2006, 08:02:40
Job time : 20.6053 secs
```

This Page Blank (uspto)

APP & Matt's

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:13:46 ; Search time 69.1579 Seconds
(without alignments)
54.375 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 70

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : Published_Applications_AA_Main:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	9	4	US-10-219-329-12	Sequence 12, Appl
2	54	100.0	9	4	US-10-153-185-12	Sequence 12, Appl
3	54	100.0	9	4	US-10-219-561-12	Sequence 12, Appl
4	54	100.0	9	4	US-10-032-376A-12	Sequence 12, Appl
5	54	100.0	9	4	US-10-335-207-12	Sequence 12, Appl
6	54	100.0	9	5	US-10-601-059-12	Sequence 12, Appl
7	54	100.0	9	6	US-11-031-488-12	Sequence 12, Appl
8	54	100.0	14	4	US-10-219-561-19	Sequence 19, Appl
9	54	100.0	14	4	US-10-335-207-19	Sequence 19, Appl
10	54	100.0	17	4	US-10-219-561-20	Sequence 20, Appl
11	54	100.0	17	4	US-10-335-207-20	Sequence 20, Appl
12	54	100.0	19	4	US-10-219-329-11	Sequence 11, Appl
13	54	100.0	19	4	US-10-153-185-11	Sequence 11, Appl
14	54	100.0	19	4	US-10-219-561-11	Sequence 11, Appl
15	54	100.0	19	4	US-10-032-376A-11	Sequence 11, Appl
16	54	100.0	19	4	US-10-335-207-11	Sequence 11, Appl
17	54	100.0	19	5	US-10-601-059-11	Sequence 11, Appl
18	54	100.0	19	6	US-11-031-488-11	Sequence 11, Appl
19	54	100.0	43	4	US-10-219-329-15	Sequence 15, Appl
20	54	100.0	43	4	US-10-153-185-15	Sequence 15, Appl
21	54	100.0	43	4	US-10-219-561-15	Sequence 15, Appl
22	54	100.0	43	4	US-10-032-376A-15	Sequence 15, Appl
23	54	100.0	43	4	US-10-335-207-15	Sequence 15, Appl
24	54	100.0	43	5	US-10-601-059-15	Sequence 15, Appl
25	54	100.0	43	6	US-11-031-488-15	Sequence 15, Appl
26	54	100.0	44	4	US-10-219-329-2	Sequence 2, Appli
27	54	100.0	44	4	US-10-153-185-2	Sequence 2, Appli
28	54	100.0	44	4	US-10-219-561-2	Sequence 2, Appli
29	54	100.0	44	4	US-10-032-376A-2	Sequence 2, Appli
30	54	100.0	44	4	US-10-335-207-2	Sequence 2, Appli
31	54	100.0	44	5	US-10-601-059-2	Sequence 2, Appli
32	54	100.0	44	6	US-11-031-488-2	Sequence 2, Appli
33	54	100.0	75	3	US-09-864-761-37964	Sequence 37964, A
34	54	100.0	77	3	US-09-833-747A-11	Sequence 11, Appl
35	54	100.0	79	3	US-09-833-747A-8	Sequence 8, Appli
36	54	100.0	79	3	US-09-833-747A-9	Sequence 9, Appli
37	54	100.0	80	3	US-09-833-747A-1	Sequence 1, Appli
38	54	100.0	80	3	US-09-833-747A-7	Sequence 7, Appli
39	54	100.0	80	3	US-09-833-747A-10	Sequence 10, Appl
40	54	100.0	80	3	US-09-833-747A-12	Sequence 12, Appl
41	54	100.0	80	3	US-09-833-747A-13	Sequence 13, Appl
42	54	100.0	80	3	US-09-833-747A-14	Sequence 14, Appl
43	54	100.0	80	3	US-09-833-747A-15	Sequence 15, Appl
44	54	100.0	92	3	US-09-833-747A-2	Sequence 2, Appli
45	54	100.0	462	5	US-10-852-707-56	Sequence 56, Appl
46	54	100.0	468	5	US-10-450-763-54360	Sequence 54360, A
47	54	100.0	660	3	US-09-391-104-19	Sequence 19, Appl
48	54	100.0	660	3	US-09-801-196-35	Sequence 35, Appl
49	54	100.0	660	3	US-09-918-715-208	Sequence 208, App
50	54	100.0	660	4	US-10-219-329-14	Sequence 14, Appl
51	54	100.0	660	4	US-10-301-822-125	Sequence 125, App
52	54	100.0	660	4	US-10-153-185-14	Sequence 14, Appl
53	54	100.0	660	4	US-10-219-561-14	Sequence 14, Appl
54	54	100.0	660	4	US-10-131-985-25	Sequence 25, Appl
55	54	100.0	660	4	US-10-447-315-3	Sequence 3, Appli
56	54	100.0	660	4	US-10-032-376A-14	Sequence 14, Appl
57	54	100.0	660	4	US-10-335-207-14	Sequence 14, Appl
58	54	100.0	660	4	US-10-480-621-1	Sequence 1, Appli
59	54	100.0	660	4	US-10-474-794-208	Sequence 208, App
60	54	100.0	660	5	US-10-601-059-14	Sequence 14, Appl
61	54	100.0	660	5	US-10-872-198-131	Sequence 131, App
62	54	100.0	660	5	US-10-901-417-25	Sequence 25, Appl
63	54	100.0	660	5	US-10-979-159-208	Sequence 208, App
64	54	100.0	660	5	US-10-287-436A-489	Sequence 489, App
65	54	100.0	660	5	US-10-287-436A-1185	Sequence 1185, Ap
66	54	100.0	660	6	US-11-021-951-131	Sequence 131, App
67	54	100.0	660	6	US-11-031-488-14	Sequence 14, Appl
68	54	100.0	663	4	US-10-115-223-30	Sequence 30, Appl
69	54	100.0	663	4	US-10-402-212-30	Sequence 30, Appl
70	54	100.0	1330	5	US-10-450-763-54358	Sequence 54358, A

ALIGNMENTS

RESULT 1
US-10-219-329-12
; Sequence 12, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Weart, Ilona f.
; TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
; FILE REFERENCE: 1443.035WO1
; CURRENT APPLICATION NUMBER: US/10/219,329
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 9
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-329-12

Query Match 100.0%; Score 54; DB 4; Length 9;
Best Local Similarity 100.0%; Pred. No. 1.7e+06;

```
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 2
US-10-153-185-12
; Sequence 12, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-12

  Query Match             100.0%;  Score 54;  DB 4;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 3
US-10-219-561-12
; Sequence 12, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-12

  Query Match             100.0%;  Score 54;  DB 4;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 4
US-10-032-376A-12
; Sequence 12, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-12

  Query Match             100.0%;  Score 54;  DB 4;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 5
US-10-335-207-12
; Sequence 12, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-12

  Query Match             100.0%;  Score 54;  DB 4;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 6
US-10-601-059-12
; Sequence 12, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
```

```
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-12

  Query Match             100.0%;  Score 54;  DB 5;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 7
US-11-031-488-12
; Sequence 12, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 9
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-12

  Query Match             100.0%;  Score 54;  DB 6;  Length 9;
  Best Local Similarity   100.0%;  Pred. No. 1.7e+06;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 8
US-10-219-561-19
; Sequence 19, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 19
;   LENGTH: 14
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-19

  Query Match             100.0%;  Score 54;  DB 4;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.039;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 9
US-10-335-207-19
; Sequence 19, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 19
;   LENGTH: 14
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-19

  Query Match             100.0%;  Score 54;  DB 4;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.039;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          5 PRCGNPDVA 13


RESULT 10
US-10-219-561-20
; Sequence 20, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 20
;   LENGTH: 17
;   TYPE: PRT
```

```
;   ORGANISM: Homo sapiens
US-10-219-561-20

  Query Match             100.0%;  Score 54;  DB 4;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 0.047;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          8 PRCGNPDVA 16


RESULT 11
US-10-335-207-20
; Sequence 20, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 20
;   LENGTH: 17
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-20

  Query Match             100.0%;  Score 54;  DB 4;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 0.047;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          8 PRCGNPDVA 16


RESULT 12
US-10-219-329-11
; Sequence 11, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-11

  Query Match             100.0%;  Score 54;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 13
US-10-153-185-11
; Sequence 11, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-11

  Query Match             100.0%;  Score 54;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 14
US-10-219-561-11
; Sequence 11, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-11

  Query Match             100.0%;  Score 54;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 15
US-10-032-376A-11
; Sequence 11, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
```

```
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-11

  Query Match             100.0%;  Score 54;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 16
US-10-335-207-11
; Sequence 11, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-11

  Query Match             100.0%;  Score 54;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 17
US-10-601-059-11
; Sequence 11, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-11

  Query Match             100.0%;  Score 54;  DB 5;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 18
US-11-031-488-11
; Sequence 11, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-11

  Query Match             100.0%;  Score 54;  DB 6;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.053;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db          1 PRCGNPDVA 9


RESULT 19
US-10-219-329-15
; Sequence 15, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
```

US-10-219-329-15

Query Match 100.0%; Score 54; DB 4; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 20
US-10-153-185-15
; Sequence 15, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 43
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-15

Query Match 100.0%; Score 54; DB 4; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 21
US-10-219-561-15
; Sequence 15, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; APPLICANT: Villanueva, Julie M.
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.008US2
; CURRENT APPLICATION NUMBER: US/10/219,561
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 10/153,185
; PRIOR FILING DATE: 2002-05-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 43
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-561-15

Query Match 100.0%; Score 54; DB 4; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 22
US-10-032-376A-15
; Sequence 15, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Steven
; TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
; FILE REFERENCE: 1443.008US1
; CURRENT APPLICATION NUMBER: US/10/032,376A
; CURRENT FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 43
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-032-376A-15

Query Match 100.0%; Score 54; DB 4; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 23
US-10-335-207-15
; Sequence 15, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
; APPLICANT: Malik, Sohail
; APPLICANT: Quirk, Stephen
; TITLE OF INVENTION: Method to Increase Fibronectin
; FILE REFERENCE: 1443.047US1
; CURRENT APPLICATION NUMBER: US/10/335,207
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 43
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-335-207-15

Query Match 100.0%; Score 54; DB 4; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
|||||||||
Db 24 PRCGNPDVA 32

RESULT 24
US-10-601-059-15
; Sequence 15, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
; APPLICANT: Yang, Shu-Ping
; APPLICANT: Quirk, Stephen
; APPLICANT: Kimberly-Clark Worldwide, Inc.
; TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
; FILE REFERENCE: 1443.064US1
; CURRENT APPLICATION NUMBER: US/10/601,059

```
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-15

  Query Match             100.0%;  Score 54;  DB 5;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.11;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 25
US-11-031-488-15
; Sequence 15, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-15

  Query Match             100.0%;  Score 54;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.11;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 26
US-10-219-329-2
; Sequence 2, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-2

  Query Match             100.0%;  Score 54;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 27
US-10-153-185-2
; Sequence 2, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match             100.0%;  Score 54;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 28
US-10-219-561-2
; Sequence 2, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
```

```
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-2

  Query Match             100.0%;  Score 54;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 29
US-10-032-376A-2
; Sequence 2, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-2

  Query Match             100.0%;  Score 54;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 30
US-10-335-207-2
; Sequence 2, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-2

  Query Match             100.0%;  Score 54;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 31
US-10-601-059-2
; Sequence 2, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-2

  Query Match             100.0%;  Score 54;  DB 5;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         24 PRCGNPDVA 32


RESULT 32
US-11-031-488-2
; Sequence 2, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-2

  Query Match             100.0%;  Score 54;  DB 6;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.12;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
```

```
Db         24 PRCGNPDVA 32


RESULT 33
US-09-864-761-37964
; Sequence 37964, Application US/09864761
; Patent No. US20020048763A1
; GENERAL INFORMATION:
;  APPLICANT: Penn, Sharron G.
;  APPLICANT:  Rank, David R.
;  APPLICANT:  Hanzel, David K.
;  APPLICANT:  Chen, Wensheng
;  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
;  TITLE OF INVENTION:  GENE EXPRESSION ANALYSIS BY MICROARRAY
;  FILE REFERENCE: Aeomica-X-1
;  CURRENT APPLICATION NUMBER: US/09/864,761
;  CURRENT FILING DATE:  2001-05-23
;  PRIOR APPLICATION NUMBER: US 60/180,312
;  PRIOR FILING DATE: 2000-02-04
;  PRIOR APPLICATION NUMBER: US 60/207,456
;  PRIOR FILING DATE: 2000-05-26
;  PRIOR APPLICATION NUMBER: US 09/632,366
;  PRIOR FILING DATE: 2000-08-03
;  PRIOR APPLICATION NUMBER: GB 24263.6
;  PRIOR FILING DATE: 2000-10-04
;  PRIOR APPLICATION NUMBER: US 60/236,359
;  PRIOR FILING DATE: 2000-09-27
;  PRIOR APPLICATION NUMBER: PCT/US01/00666
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00667
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00664
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00669
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00665
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00668
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00663
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00662
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00661
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00670
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: US 60/234,687
;  PRIOR FILING DATE: 2000-09-21
;  PRIOR APPLICATION NUMBER: US 09/608,408
;  PRIOR FILING DATE: 2000-06-30
;  PRIOR APPLICATION NUMBER: US 09/774,203
;  PRIOR FILING DATE: 2001-01-29
;  NUMBER OF SEQ ID NOS: 49117
;  SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 37964
;   LENGTH: 75
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: MAP TO AC007336.2
;   OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1.1
;   OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5
;   OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL =   2
;   OTHER INFORMATION: EST_HUMAN HIT: AI752577.1, EVALUE 1.00e-41
;   OTHER INFORMATION: SWISSPROT HIT: P33436, EVALUE 1.00e-42
US-09-864-761-37964

  Query Match            100.0%;  Score 54;  DB 3;  Length 75;
  Best Local Similarity  100.0%;  Pred. No. 0.19;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
               |||||||||
Db         49 PRCGNPDVA 57


RESULT 34
US-09-833-747A-11
; Sequence 11, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 77
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: consensus sequence
;   NAME/KEY: VARIANT
;   LOCATION: 25
;   OTHER INFORMATION: Xaa = Phe or Tyr
;   NAME/KEY: VARIANT
;   LOCATION: 31
;   OTHER INFORMATION: Xaa = Glu or Asp
;   NAME/KEY: VARIANT
;   LOCATION: 32
;   OTHER INFORMATION: Xaa = Ser or Asn
;   NAME/KEY: VARIANT
;   LOCATION: 53
;   OTHER INFORMATION: Xaa = Gln or Glu
;   NAME/KEY: VARIANT
;   LOCATION: 66
;   OTHER INFORMATION: Xaa = Arg or Lys
US-09-833-747A-11

  Query Match            100.0%;  Score 54;  DB 3;  Length 77;
  Best Local Similarity  100.0%;  Pred. No. 0.2;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
               |||||||||
Db         68 PRCGNPDVA 76


RESULT 35
US-09-833-747A-8
; Sequence 8, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
;   LENGTH: 79
;   TYPE: PRT
;   ORGANISM: Oryctolagus cuniculus
US-09-833-747A-8

  Query Match            100.0%;  Score 54;  DB 3;  Length 79;
```

```
  Best Local Similarity   100.0%;  Pred. No. 0.2;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         70 PRCGNPDVA 78


RESULT 36
US-09-833-747A-9
; Sequence 9, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 79
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: consensus sequence
;   NAME/KEY: VARIANT
;   LOCATION: 4
;   OTHER INFORMATION: Xaa = Ile or Val
;   NAME/KEY: VARIANT
;   LOCATION: 33
;   OTHER INFORMATION: Xaa = Glu or Asp
;   NAME/KEY: VARIANT
;   LOCATION: 58
;   OTHER INFORMATION: Xaa = Asp or Glu
;   NAME/KEY: VARIANT
;   LOCATION: 62
;   OTHER INFORMATION: Xaa = Asn or Ser
US-09-833-747A-9

  Query Match             100.0%;  Score 54;  DB 3;  Length 79;
  Best Local Similarity   100.0%;  Pred. No. 0.2;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         70 PRCGNPDVA 78


RESULT 37
US-09-833-747A-1
; Sequence 1, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-833-747A-1

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 38
US-09-833-747A-7
; Sequence 7, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Rattus norvegicus
US-09-833-747A-7

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 39
US-09-833-747A-10
; Sequence 10, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-09-833-747A-10

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 40
US-09-833-747A-12
; Sequence 12, Application US/09833747A
; Patent No. US20020151481A1
```

```
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: consensus sequence
;   NAME/KEY: VARIANT
;   LOCATION: 13
;   OTHER INFORMATION: Xaa = Ala or Ser
US-09-833-747A-12

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 41
US-09-833-747A-13
; Sequence 13, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Mus musculus
US-09-833-747A-13

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 42
US-09-833-747A-14
; Sequence 14, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Rattus norvegicus
US-09-833-747A-14

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 43
US-09-833-747A-15
; Sequence 15, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: consensus sequence
US-09-833-747A-15

  Query Match             100.0%;  Score 54;  DB 3;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         71 PRCGNPDVA 79


RESULT 44
US-09-833-747A-2
; Sequence 2, Application US/09833747A
; Patent No. US20020151481A1
; GENERAL INFORMATION:
;  APPLICANT: Weissbach, Lawrence
;  TITLE OF INVENTION: MMP-2 PROPEPTIDE FOR USE AS
;  TITLE OF INVENTION:  ANTIANGIOGENIC OR ANTITUMOR AGENT
;  FILE REFERENCE: 00786-430001
;  CURRENT APPLICATION NUMBER: US/09/833,747A
;  CURRENT FILING DATE:  2001-04-12
;  PRIOR APPLICATION NUMBER: US 60/200,115
;  PRIOR FILING DATE: 2000-04-27
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 92
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-833-747A-2

  Query Match             100.0%;  Score 54;  DB 3;  Length 92;
  Best Local Similarity   100.0%;  Pred. No. 0.24;
```

```
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         83 PRCGNPDVA 91


RESULT 45
US-10-852-707-56
; Sequence 56, Application US/10852707
; Publication No. US20050142572A1
; GENERAL INFORMATION:
;  APPLICANT: Macina, Roberto
;  APPLICANT:  Turner, Leah
;  APPLICANT:  Sun, Yongming
;  TITLE OF INVENTION: Compositions, Splice Variants and Methods Relating to Lung Specif
;  TITLE OF INVENTION:  Nucleic Acids and Proteins
;  FILE REFERENCE: DEX-0486
;  CURRENT APPLICATION NUMBER: US/10/852,707
;  CURRENT FILING DATE:  2004-05-24
;  PRIOR APPLICATION NUMBER: US 60/473,941
;  PRIOR FILING DATE: 2003-05-22
;  NUMBER OF SEQ ID NOS: 138
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 56
;   LENGTH: 462
;   TYPE: PRT
;   ORGANISM: Homo sapien
US-10-852-707-56

  Query Match             100.0%;  Score 54;  DB 5;  Length 462;
  Best Local Similarity   100.0%;  Pred. No. 1.1;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 46
US-10-450-763-54360
; Sequence 54360, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54360
;   LENGTH: 468
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (221)..(258)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (167)..(264)
;   OTHER INFORMATION: Fibronectin type II domain identified by PFam, accession name
;   OTHER INFORMATION: fn2, E-value=4.4e-55, PFam score of 147.1
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)...(468)
;   OTHER INFORMATION: Xaa = X or * as defined in Table 2
US-10-450-763-54360

  Query Match             100.0%;  Score 54;  DB 5;  Length 468;
  Best Local Similarity   100.0%;  Pred. No. 1.1;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         86 PRCGNPDVA 94


RESULT 47
US-09-391-104-19
; Sequence 19, Application US/09391104
; Publication No. US20020031817A1
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match             100.0%;  Score 54;  DB 3;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 48
US-09-801-196-35
; Sequence 35, Application US/09801196
; Patent No. US20020037827A1
; GENERAL INFORMATION:
;  APPLICANT:  Wang, Kai
;  APPLICANT:  Smith, Ryan
;  APPLICANT:  Fajardo, Mark
;  APPLICANT:  Moss, Patrick
;  TITLE OF INVENTION:  A NOVEL MATRIX METALLOPROTEINASE (MMP-25)
;  TITLE OF INVENTION:  EXPRESSED IN SKIN CELLS
;  FILE REFERENCE:  240083.509
;  CURRENT APPLICATION NUMBER: US/09/801,196
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  37
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 35
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-801-196-35

  Query Match             100.0%;  Score 54;  DB 3;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 49
US-09-918-715-208
; Sequence 208, Application US/09918715
; Publication No. US20030017157A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/09/918,715
;  CURRENT FILING DATE:  2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-918-715-208

  Query Match             100.0%;  Score 54;  DB 3;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 50
US-10-219-329-14
; Sequence 14, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-14

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 51
US-10-301-822-125
; Sequence 125, Application US/10301822
; Publication No. US20030148410A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/10/301,822
;  CURRENT FILING DATE:  2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-10-301-822-125

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 52
US-10-153-185-14
; Sequence 14, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108
```

```
RESULT 53
US-10-219-561-14
; Sequence 14, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-14

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 54
US-10-131-985-25
; Sequence 25, Application US/10131985
; Publication No. US20030199440A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/131,985
;  CURRENT FILING DATE:  2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-131-985-25

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 55
US-10-447-315-3
; Sequence 3, Application US/10447315
; Publication No. US20040071687A1
; GENERAL INFORMATION:
;  APPLICANT: Rafii, Shahin
;  APPLICANT:  Heissig, Beate
;  APPLICANT:  Hattori, Koichi
;  APPLICANT:  Cornell Research Foundation, Inc.
;  TITLE OF INVENTION: Adult Stem Cell Recruitment
;  FILE REFERENCE: 1676.006US1
;  CURRENT APPLICATION NUMBER: US/10/447,315
;  CURRENT FILING DATE:  2003-05-28
;  PRIOR APPLICATION NUMBER: US 60/383,658
;  PRIOR FILING DATE: 2002-05-28
;  NUMBER OF SEQ ID NOS: 28
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-447-315-3

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 56
US-10-032-376A-14
; Sequence 14, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-14

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 57
US-10-335-207-14
; Sequence 14, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
```

```
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-14

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 58
US-10-480-621-1
; Sequence 1, Application US/10480621
; Publication No. US20040175817A1
; GENERAL INFORMATION:
;  APPLICANT: Jepson, Holly
;  APPLICANT:  Minshull, Claire
;  APPLICANT:  Pauptit, Richard
;  APPLICANT:  Rowsell, Sian
;  TITLE OF INVENTION: A CRYSTALLISED CATALYTIC DOMAIN OF MATRIX
;  TITLE OF INVENTION:  METALLOPROTEINASE 9 (MMP9) AND THE USE OF
;  TITLE OF INVENTION:  ITS THREE DIMENSIONAL STRUCTURE TO DESIGN
;  TITLE OF INVENTION:  MMP9 MODULATORS
;  FILE REFERENCE: 06275-377US1
;  CURRENT APPLICATION NUMBER: US/10/480,621
;  CURRENT FILING DATE:  2003-12-12
;  PRIOR APPLICATION NUMBER: PCT/SE02/01266
;  PRIOR FILING DATE: 2002-06-24
;  PRIOR APPLICATION NUMBER: SE 0102298-7
;  PRIOR FILING DATE: 2001-06-27
;  NUMBER OF SEQ ID NOS: 2
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-480-621-1

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 59
US-10-474-794-208
; Sequence 208, Application US/10474794
; Publication No. US20040213793A1
; GENERAL INFORMATION:
;  APPLICANT: Carson-Walter, Eleanor
;  APPLICANT:  St. Croix, Brad
;  APPLICANT:  Vogelstein, Bert
;  APPLICANT:  Kinzler, Kenneth
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00179
;  CURRENT APPLICATION NUMBER: US/10/474,794
;  CURRENT FILING DATE:  2003-10-14
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2001-04-11
;  PRIOR APPLICATION NUMBER: 60/308,829
;  PRIOR FILING DATE: 2001-08-01
;  NUMBER OF SEQ ID NOS: 359
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-474-794-208

  Query Match             100.0%;  Score 54;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 60
US-10-601-059-14
; Sequence 14, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-14

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 61
US-10-872-198-131
; Sequence 131, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
;  APPLICANT: Ulrich HAUPTS
;  APPLICANT:  Andre KOLTERMANN
;  APPLICANT:  Andreas SCHEIDIG
;  APPLICANT:  Christian VOETSMEIER
;  APPLICANT:  Ulrich Kettling
;  TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
;  FILE REFERENCE: 04156.0002U4
;  CURRENT APPLICATION NUMBER: US/10/872,198
;  CURRENT FILING DATE:  2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
```

```
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 149
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-872-198-131

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 62
US-10-901-417-25
; Sequence 25, Application US/10901417
; Publication No. US20050026836A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/901,417
;  CURRENT FILING DATE:  2004-07-28
;  PRIOR APPLICATION NUMBER: US/10/131,985
;  PRIOR FILING DATE: 2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-901-417-25

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 63
US-10-979-159-208
; Sequence 208, Application US/10979159
; Publication No. US20050142138A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/10/979,159
;  CURRENT FILING DATE:  2004-11-03
;  PRIOR APPLICATION NUMBER: US/09/918,715
;  PRIOR FILING DATE: 2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-979-159-208

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 64
US-10-287-436A-489
; Sequence 489, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 489
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-489

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 65
US-10-287-436A-1185
; Sequence 1185, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1185
;   LENGTH: 660
```

```
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-1185

  Query Match             100.0%;  Score 54;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 66
US-11-021-951-131
; Sequence 131, Application US/11021951
; Publication No. US20050175581A1
; GENERAL INFORMATION:
;  APPLICANT: HAUPTS, Ulrich
;  APPLICANT:  KOLTERMANN, Andre
;  APPLICANT:  SCHEIDIG, Andreas
;  APPLICANT:  VOTSMEIER, Christian
;  APPLICANT:  Kettling, Ulrich
;  APPLICANT:  COCO, Wayne Michael
;  TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
;  TITLE OF INVENTION:  And Diagnostic Use Thereof
;  FILE REFERENCE: 04156.0002U5
;  CURRENT APPLICATION NUMBER: US/11/021,951
;  CURRENT FILING DATE:  2004-12-22
;  PRIOR APPLICATION NUMBER: 10/872,198
;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 191
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-021-951-131

  Query Match             100.0%;  Score 54;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 67
US-11-031-488-14
; Sequence 14, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-14

  Query Match             100.0%;  Score 54;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        100 PRCGNPDVA 108


RESULT 68
US-10-115-223-30
; Sequence 30, Application US/10115223
; Publication No. US20030176334A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
;  FILE REFERENCE: MER0049S
;  CURRENT APPLICATION NUMBER: US/10/115,223
;  CURRENT FILING DATE:  2002-04-02
;  PRIOR APPLICATION NUMBER: US/09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,896
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  NUMBER OF SEQ ID NOS: 45
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-115-223-30

  Query Match             100.0%;  Score 54;  DB 4;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 69
US-10-402-212-30
; Sequence 30, Application US/10402212
; Publication No. US20040063790A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter C.
;  APPLICANT:  Cheresh, David A.
;  APPLICANT:  Silletti, Steven A.
;  APPLICANT:  The Scripps Research Institute
;  TITLE OF INVENTION: METHODS FOR INHIBITION OF ANGIOGENESIS
;  FILE REFERENCE: TSRI-419.3
;  CURRENT APPLICATION NUMBER: US/10/402,212
;  CURRENT FILING DATE:  2003-03-28
;  PRIOR APPLICATION NUMBER: 10/115,223
;  PRIOR FILING DATE: 2002-04-02
```

```
;  PRIOR APPLICATION NUMBER: 09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,869
;  PRIOR FILING DATE: 1996-05-31
;  NUMBER OF SEQ ID NOS: 47
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-402-212-30

  Query Match             100.0%;  Score 54;  DB 4;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 1.5;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db         97 PRCGNPDVA 105


RESULT 70
US-10-450-763-54358
; Sequence 54358, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54358
;   LENGTH: 1330
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (579)..(616)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (271)..(451)
;   OTHER INFORMATION: Matrixin domain identified by PFam, accession name
;   OTHER INFORMATION: Peptidase_M10, E-value=3.7e-109, PFam score of 376.1
US-10-450-763-54358

  Query Match             100.0%;  Score 54;  DB 5;  Length 1330;
  Best Local Similarity   100.0%;  Pred. No. 3;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        318 PRCGNPDVA 326


Search completed: February 21, 2006, 18:35:36
Job time : 70.1579 secs
```

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:21:13 ; Search time 5.92105 Seconds
(without alignments)
21.644 Million cell updates/sec

Title: US-10-601-059-12
Perfect score: 54
Sequence: 1 PRCGNPDVA 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 108093 seqs, 14239677 residues

Total number of hits satisfying chosen parameters: 108093

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	54	100.0	660	7	US-11-186-284-125	Sequence 125, App
2	54	100.0	708	6	US-10-821-234-917	Sequence 917, App
3	45	83.3	19	6	US-10-503-575-150	Sequence 150, App
4	45	83.3	267	6	US-10-995-561-542	Sequence 542, App
5	45	83.3	267	7	US-11-186-284-129	Sequence 129, App
6	45	83.3	469	7	US-11-186-284-119	Sequence 119, App
7	45	83.3	483	7	US-11-037-243-79	Sequence 79, Appl
8	41	75.9	444	7	US-11-043-788-244	Sequence 244, App
9	41	75.9	477	7	US-11-186-284-127	Sequence 127, App
10	41	75.9	477	7	US-11-043-788-243	Sequence 243, App
11	41	75.9	513	6	US-10-131-826A-192	Sequence 192, App
12	41	75.9	513	6	US-10-995-561-566	Sequence 566, App
13	38	70.4	225	7	US-11-043-788-278	Sequence 278, App
14	38	70.4	276	7	US-11-043-788-277	Sequence 277, App
15	38	70.4	360	7	US-11-043-788-276	Sequence 276, App
16	38	70.4	470	7	US-11-186-284-123	Sequence 123, App
17	38	70.4	475	7	US-11-174-150-45	Sequence 45, Appl
18	38	70.4	707	7	US-11-186-284-132	Sequence 132, App
19	38	70.4	707	7	US-11-044-640-2	Sequence 2, Appli
20	38	70.4	707	7	US-11-043-788-275	Sequence 275, App
21	37	68.5	488	6	US-10-821-234-1654	Sequence 1654, Ap
22	37	68.5	488	7	US-11-186-284-121	Sequence 121, App
23	37	68.5	582	7	US-11-090-439-58	Sequence 58, Appl
24	37	68.5	582	7	US-11-169-041-130	Sequence 130, App
25	37	68.5	607	7	US-11-080-991-88	Sequence 88, Appl
26	36	66.7	290	6	US-10-467-657-5128	Sequence 5128, Ap
27	36	66.7	1018	7	US-11-067-121-17	Sequence 17, Appl
28	36	66.7	1028	7	US-11-067-121-7	Sequence 7, Appli
29	36	66.7	1036	6	US-10-131-826A-142	Sequence 142, App
30	35	64.8	249	6	US-10-793-626-306	Sequence 306, App
31	35	64.8	274	7	US-11-072-512-3379	Sequence 3379, Ap
32	35	64.8	336	6	US-10-793-626-1858	Sequence 1858, Ap
33	35	64.8	452	6	US-10-793-626-3092	Sequence 3092, Ap
34	34	63.0	420	6	US-10-793-626-3300	Sequence 3300, Ap
35	34	63.0	496	6	US-10-793-626-2896	Sequence 2896, Ap
36	33	61.1	28	6	US-10-467-657-8865	Sequence 8865, Ap
37	33	61.1	517	6	US-10-055-877-304	Sequence 304, App
38	33	61.1	548	6	US-10-055-877-320	Sequence 320, App
39	33	61.1	600	6	US-10-055-877-103	Sequence 103, App
40	33	61.1	675	6	US-10-055-877-117	Sequence 117, App
41	33	61.1	675	6	US-10-055-877-317	Sequence 317, App
42	33	61.1	675	6	US-10-055-877-318	Sequence 318, App
43	32	59.3	35	7	US-11-055-163-3	Sequence 3, Appli
44	32	59.3	35	7	US-11-055-163-4	Sequence 4, Appli
45	32	59.3	36	6	US-10-467-657-5744	Sequence 5744, Ap

ALIGNMENTS

RESULT 1
US-11-186-284-125
; Sequence 125, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
; APPLICANT: Millennium Pharmaceuticals, Inc.
; APPLICANT: Berger, Allison
; APPLICANT: Guillemette, Tracy L.
; APPLICANT: Kamatkar, Shubhangi
; APPLICANT: Schlegel, Robert
; APPLICANT: Monahan, John E.
; APPLICANT: Thibodeau, Stephen N.
; APPLICANT: Burgart, Lawrence J.
; TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
; TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
; TITLE OF INVENTION: THERAPY OF COLON CANCER
; FILE REFERENCE: MPM01-029P2RNM
; CURRENT APPLICATION NUMBER: US/11/186,284
; CURRENT FILING DATE: 2005-07-21
; PRIOR APPLICATION NUMBER: US/10/301,822
; PRIOR FILING DATE: 2002-11-21
; PRIOR APPLICATION NUMBER: US 60/339,971
; PRIOR FILING DATE: 2001-12-10
; PRIOR APPLICATION NUMBER: US 60/361,978
; PRIOR FILING DATE: 2002-03-05
; PRIOR APPLICATION NUMBER: US 60/381,988
; PRIOR FILING DATE: 2002-05-20
; NUMBER OF SEQ ID NOS: 228
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
; LENGTH: 660
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-11-186-284-125

Query Match 100.0%; Score 54; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.042;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PRCGNPDVA 9
||||||||| |
Db 100 PRCGNPDVA 108

RESULT 2
US-10-821-234-917
; Sequence 917, Application US/10821234
; Publication No. US20050255114A1

```
; GENERAL INFORMATION:
;  APPLICANT: Labat, Ivan
;  APPLICANT:  Stache-Crain, Birgit
;  APPLICANT:  Andarmani, Susan
;  APPLICANT:  Tang, Y. Tom
;  TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
;  FILE REFERENCE: 821A
;  CURRENT APPLICATION NUMBER: US/10/821,234
;  CURRENT FILING DATE:  2004-04-07
;  PRIOR APPLICATION NUMBER: US 60/462,047
;  PRIOR FILING DATE: 2003-04-07
;  NUMBER OF SEQ ID NOS: 1704
;  SOFTWARE: pt_SEQ_genes Version 1.0
; SEQ ID NO 917
;   LENGTH: 708
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-821-234-917

  Query Match             100.0%;  Score 54;  DB 6;  Length 708;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||||||||
Db        148 PRCGNPDVA 156


RESULT 3
US-10-503-575-150
; Sequence 150, Application US/10503575
; Publication No. US20050244823A1
; GENERAL INFORMATION:
;  APPLICANT: Drijfhout, Jan Wouter
;  APPLICANT:  van Veelen, Petrus Antonius
;  APPLICANT:  Koning, Frits
;  TITLE OF INVENTION: NOVEL EPITOPES FOR CELIAC DISEASE AND AUTOIMMUNE DISEASES, METHOD
;  TITLE OF INVENTION:  DETECTING THOSE AND NOVEL NON-ANTIGENIC FOOD COMPOUNDS
;  FILE REFERENCE: 2799/72843-PCT-US
;  CURRENT APPLICATION NUMBER: US/10/503,575
;  CURRENT FILING DATE:  2004-08-04
;  PRIOR APPLICATION NUMBER: PCT/NL03/00077
;  PRIOR FILING DATE: 2003-02-04
;  PRIOR APPLICATION NUMBER: EP 02075456.0
;  PRIOR FILING DATE: 2002-02-04
;  NUMBER OF SEQ ID NOS: 340
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 150
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-503-575-150

  Query Match             83.3%;  Score 45;  DB 6;  Length 19;
  Best Local Similarity   88.9%;  Pred. No. 0.05;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db          1 PRCGVPDVA 9


RESULT 4
US-10-995-561-542
; Sequence 542, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
;  APPLICANT: CARGILL, Michele et al.
;  TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
;  TITLE OF INVENTION:  CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
;  TITLE OF INVENTION:  DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001559
;  CURRENT APPLICATION NUMBER: US/10/995,561
;  CURRENT FILING DATE:  2004-11-24
;  NUMBER OF SEQ ID NOS: 85702
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 542
;   LENGTH: 267
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-995-561-542

  Query Match             83.3%;  Score 45;  DB 6;  Length 267;
  Best Local Similarity   88.9%;  Pred. No. 0.61;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         85 PRCGVPDVA 93


RESULT 5
US-11-186-284-129
; Sequence 129, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 129
;   LENGTH: 267
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-129

  Query Match             83.3%;  Score 45;  DB 7;  Length 267;
  Best Local Similarity   88.9%;  Pred. No. 0.61;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         85 PRCGVPDVA 93


RESULT 6
US-11-186-284-119
; Sequence 119, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
```

```
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 119
;   LENGTH: 469
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-119

  Query Match             83.3%;  Score 45;  DB 7;  Length 469;
  Best Local Similarity   88.9%;  Pred. No. 1;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         90 PRCGVPDVA 98


RESULT 7
US-11-037-243-79
; Sequence 79, Application US/11037243
; Publication No. US20050287546A1
; GENERAL INFORMATION:
;  APPLICANT: PLOWMAN, GREGORY
;  APPLICANT:  WHYTE, DAVID
;  APPLICANT:  CAENEPEEL, SEAN
;  APPLICANT:  CHARYDCZAK, GLEN
;  APPLICANT:  MANNING, GERARD
;  APPLICANT:  SUDARSANAM, SUCHA
;  TITLE OF INVENTION: NOVEL PROTEASES
;  FILE REFERENCE: 038602/1214
;  CURRENT APPLICATION NUMBER: US/11/037,243
;  CURRENT FILING DATE:  2005-05-26
;  PRIOR APPLICATION NUMBER: US/09/888,615
;  PRIOR FILING DATE: 2001-06-26
;  PRIOR APPLICATION NUMBER: 60/214,047
;  PRIOR FILING DATE: 2000-06-26
;  NUMBER OF SEQ ID NOS: 150
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 79
;   LENGTH: 483
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-037-243-79

  Query Match             83.3%;  Score 45;  DB 7;  Length 483;
  Best Local Similarity   88.9%;  Pred. No. 1.1;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDVA 9
              |||| ||||
Db         98 PRCGVPDVA 106


RESULT 8
US-11-043-788-244
; Sequence 244, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 244
;   LENGTH: 444
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-244

  Query Match             75.9%;  Score 41;  DB 7;  Length 444;
  Best Local Similarity   87.5%;  Pred. No. 4.8;
  Matches    7;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| |||
Db         57 PRCGVPDV 64


RESULT 9
US-11-186-284-127
; Sequence 127, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/11/186,284
;  CURRENT FILING DATE:  2005-07-21
;  PRIOR APPLICATION NUMBER: US/10/301,822
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 127
;   LENGTH: 477
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-11-186-284-127

  Query Match             75.9%;  Score 41;  DB 7;  Length 477;
  Best Local Similarity   87.5%;  Pred. No. 5.1;
  Matches    7;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| |||
Db         90 PRCGVPDV 97


RESULT 10
US-11-043-788-243
; Sequence 243, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
```

```
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 243
;   LENGTH: 477
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-243

  Query Match             75.9%;  Score 41;  DB 7;  Length 477;
  Best Local Similarity   87.5%;  Pred. No. 5.1;
  Matches    7;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| |||
Db         90 PRCGVPDV 97


RESULT 11
US-10-131-826A-192
; Sequence 192, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
;  APPLICANT: Baker,Kevin P.
;  APPLICANT:  Beresini,Maureen
;  APPLICANT:  DeForge,Laura
;  APPLICANT:  Desnoyers,Luc
;  APPLICANT:  Filvaroff,Ellen
;  APPLICANT:  Gao,Wei-Qiang
;  APPLICANT:  Gerritsen,Mary E.
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Godowski,Paul J.
;  APPLICANT:  Gurney,Austin L.
;  APPLICANT:  Sherwood,Steven
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stewart,Timothy A.
;  APPLICANT:  Tumas,Daniel
;  APPLICANT:  Watanabe,Colin K
;  APPLICANT:  Wood,William
;  APPLICANT:  Zhang, Zemin
;  TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
;  TITLE OF INVENTION:  ACIDS ENCODING THE SAME
;  FILE REFERENCE: P3330R1C128
;  CURRENT APPLICATION NUMBER: US/10/131,826A
;  CURRENT FILING DATE:  2002-04-24
;  PRIOR APPLICATION NUMBER: 60/049911
;  PRIOR FILING DATE: 1997-06-18
;  PRIOR APPLICATION NUMBER: 60/056974
;  PRIOR FILING DATE: 1997-08-26
;  PRIOR APPLICATION NUMBER: 60/059113
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059115
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059117
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059122
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059184
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/059263
;  PRIOR FILING DATE: 1997-09-18
;  PRIOR APPLICATION NUMBER: 60/059352
;  PRIOR FILING DATE: 1997-09-19
;  PRIOR APPLICATION NUMBER: 60/059588
;  PRIOR FILING DATE: 1997-09-19
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 192
;   LENGTH: 513
;   TYPE: PRT
;   ORGANISM: Homo Sapien
US-10-131-826A-192

  Query Match             75.9%;  Score 41;  DB 6;  Length 513;
  Best Local Similarity   87.5%;  Pred. No. 5.5;
  Matches    7;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| |||
Db         89 PRCGVPDV 96


RESULT 12
US-10-995-561-566
; Sequence 566, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
;  APPLICANT: CARGILL, Michele et al.
;  TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
;  TITLE OF INVENTION:  CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
;  TITLE OF INVENTION:  DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001559
;  CURRENT APPLICATION NUMBER: US/10/995,561
;  CURRENT FILING DATE:  2004-11-24
;  NUMBER OF SEQ ID NOS: 85702
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 566
;   LENGTH: 513
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-995-561-566

  Query Match             75.9%;  Score 41;  DB 6;  Length 513;
  Best Local Similarity   87.5%;  Pred. No. 5.5;
  Matches    7;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| |||
Db         89 PRCGVPDV 96


RESULT 13
US-11-043-788-278
; Sequence 278, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 278
;   LENGTH: 225
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-278

  Query Match             70.4%;  Score 38;  DB 7;  Length 225;
  Best Local Similarity   75.0%;  Pred. No. 8.1;
  Matches    6;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| ||:
Db         97 PRCGVPDL 104


RESULT 14
US-11-043-788-277
; Sequence 277, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
```

```
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 277
;   LENGTH: 276
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-277

  Query Match             70.4%;  Score 38;  DB 7;  Length 276;
  Best Local Similarity   75.0%;  Pred. No. 9.9;
  Matches    6;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| ||:
Db         97 PRCGVPDL 104


RESULT 15
US-11-043-788-276
; Sequence 276, Application US/11043788
; Publication No. US20060014166A1
; GENERAL INFORMATION:
;  APPLICANT: Compugen Ltd
;  TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
;  TITLE OF INVENTION:  THEREOF FOR DIAGNOSIS OF ENDOMETRIOSIS
;  FILE REFERENCE: 1847.1006
;  CURRENT APPLICATION NUMBER: US/11/043,788
;  CURRENT FILING DATE:  2005-01-27
;  NUMBER OF SEQ ID NOS: 506
; SEQ ID NO 276
;   LENGTH: 360
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-043-788-276

  Query Match             70.4%;  Score 38;  DB 7;  Length 360;
  Best Local Similarity   75.0%;  Pred. No. 13;
  Matches    6;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 PRCGNPDV 8
              |||| ||:
Db         97 PRCGVPDL 104


Search completed: February 21, 2006, 08:26:29
Job time : 6.92105 secs
```

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 07:54:15 ; Search time 15.5263 Seconds
(without alignments)
61.970 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	660	1	A28153	gelatinase A (EC 3
2	60	100.0	662	2	S70365	gelatinase A (EC 3
3	60	100.0	662	2	A42496	gelatinase A (EC 3
4	60	100.0	662	2	S34780	gelatinase A (EC 3
5	60	100.0	663	1	S46492	gelatinase A (EC 3
6	48	80.0	31	2	A23715	gelatinase (EC 3.4
7	40	66.7	176	2	F72430	NADP-reducing hydr
8	39	65.0	121	2	H71086	hypothetical prote
9	39	65.0	403	1	S23802	homeotic protein 1
10	39	65.0	404	2	G01507	LIM domain transcr
11	39	65.0	406	1	I58187	homeotic protein 1
12	39	65.0	406	1	I48186	homeotic protein 1
13	39	65.0	406	1	I48637	homeotic protein 1
14	39	65.0	518	2	S55948	hypothetical prote
15	39	65.0	957	2	H69141	hypothetical prote
16	39	65.0	1015	2	A42915	type II cAMP-depen
17	38	63.3	343	2	S66173	mating factor MAT-
18	38	63.3	343	2	S34811	mating factor MAT1
19	38	63.3	360	2	B75319	conserved hypothet
20	38	63.3	406	1	I50375	homeotic protein 1
21	38	63.3	413	2	A54127	dolichyl-diphospho
22	38	63.3	414	2	A44654	dolichyl-diphospho
23	38	63.3	445	2	A45139	oligosaccharyltran
24	38	63.3	883	2	C86729	hypothetical prote
25	37	61.7	449	2	T15933	hypothetical prote
26	37	61.7	483	2	JC5743	matrix metalloprot
27	37	61.7	564	2	H86278	F14L17.20 protein
28	37	61.7	576	2	B86499	CT288 hypothetical
29	37	61.7	576	2	B72125	ct288 hypothetical
30	37	61.7	579	2	B86158	F22D16.20 protein
31	37	61.7	583	2	C81546	conserved hypothet
32	37	61.7	585	1	WZBE26	gene 26 protein -
33	37	61.7	706	2	S53035	probable lysophosp
34	36	60.0	229	2	B70158	conserved hypothet
35	36	60.0	293	2	A40644	transcription regu
36	36	60.0	317	2	B71922	probable sideropho
37	36	60.0	324	2	F64592	hypothetical prote
38	36	60.0	361	2	T19452	hypothetical prote
39	36	60.0	372	2	A87687	conserved hypothet
40	36	60.0	377	2	T00643	zinc metalloprotei
41	36	60.0	431	2	B72372	conserved hypothet
42	36	60.0	612	2	G83307	hypothetical prote
43	36	60.0	625	2	AB3046	conserved hypothet
44	36	60.0	625	2	B98240	hypothetical prote
45	36	60.0	660	2	C95287	conserved hypothet

ALIGNMENTS

RESULT 1
A28153
gelatinase A (EC 3.4.24.24) precursor - human
N;Alternate names: collagenase type IV; matrix metalloproteinase 2 (MMP2); progelatinase
C;Species: Homo sapiens (man)
C;Date: 28-Aug-1989 #sequence_revision 07-Jul-1995 #text_change 09-Jul-2004
C;Accession: A28153; A34202; A42225; A60187; S13858; S39436; A31480; S44432; A61498; S55
R;Collier, I.E.; Wilhelm, S.M.; Eisen, A.Z.; Marmer, B.L.; Grant, G.A.; Seltzer, J.L.; K
J. Biol. Chem. 263, 6579-6587, 1988
A;Title: H-ras oncogene-transformed human bronchial epithelial cells (TBE-1) secrete a s
A;Reference number: A28153; MUID:88198218; PMID:2834383
A;Accession: A28153
A;Molecule type: mRNA
A;Residues: 30-660 <COL>
A;Cross-references: UNIPROT:P08253; UNIPARC:UPI0000172CE7; GB:J03210; NID:g180670; PIDN:
R;Huhtala, P.; Eddy, R.L.; Fan, Y.S.; Byers, M.G.; Shows, T.B.; Tryggvason, K.
Genomics 6, 554-559, 1990
A;Title: Completion of the primary structure of the human type IV collagenase preproenzy
A;Reference number: A34202; MUID:90228972; PMID:2158484
A;Accession: A34202
A;Molecule type: DNA
A;Residues: 1-51 <HU2>
A;Cross-references: UNIPARC:UPI000016A6E3; GB:M33789; NID:g180600; PIDN:AAA52027.1; PID:
R;Huhtala, P.; Chow, L.T.; Tryggvason, K.
J. Biol. Chem. 265, 11077-11082, 1990
A;Title: Structure of the human type IV collagenase gene.
A;Reference number: A42225; MUID:90293047; PMID:2162831
A;Accession: A42225
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-51;220-393 <HUH>
A;Cross-references: UNIPARC:UPI000016A6E3; UNIPARC:UPI0000172CE8; GB:M55593; GB:J05471;
A;Note: neither the complete amino acid nor the complete nucleotide sequence is given in
R;Frisch, S.M.; Reich, R.; Collier, I.E.; Genrich, L.T.; Martin, G.; Goldberg, G.I.
Oncogene 5, 75-83, 1990
A;Title: Adenovirus E1A represses protease gene expression and inhibits metastasis of hu
A;Reference number: A60187; MUID:90206614; PMID:2157183
A;Accession: A60187
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-58 <FRI>
A;Cross-references: UNIPARC:UPI0000172CE9
R;Okada, Y.; Morodomi, T.; Enghild, J.J.; Suzuki, K.; Yasui, A.; Nakanishi, I.; Salvesen
Eur. J. Biochem. 194, 721-730, 1990
A;Title: Matrix metalloproteinase 2 from human rheumatoid synovial fibroblasts. Purifica
A;Reference number: S13858; MUID:91099351; PMID:2269296
A;Accession: S13858
A;Molecule type: protein
A;Residues: 30-45;110-124 <OKA>
A;Cross-references: UNIPARC:UPI0000172CEA; UNIPARC:UPI0000172CEB
R;Crabbe, T.; Ioannou, C.; Docherty, A.J.P.
Eur. J. Biochem. 218, 431-438, 1993

A;Title: Human progelatinase A can be activated by autolysis at a rate that is concentra
A;Reference number: S39436; MUID:94094834; PMID:8269931
A;Accession: S39436
A;Molecule type: protein
A;Residues: 30-44;444-456 <CR2>
A;Cross-references: UNIPARC:UPI00000723BF; UNIPARC:UPI0000172CEC
R;Stetler-Stevenson, W.G.; Krutzsch, H.C.; Wacher, M.P.; Margulies, I.M.K.; Liotta, L.A.
J. Biol. Chem. 264, 1353-1356, 1989
A;Title: The activation of human type IV collagenase proenzyme. Sequence identification
A;Reference number: A31480; MUID:89109136; PMID:2536363
A;Accession: A31480
A;Molecule type: protein
A;Residues: 110-123 <STE>
A;Cross-references: UNIPARC:UPI0000158DA9
R;Crabbe, T.; Smith, B.; O'Connell, J.; Docherty, A.
FEBS Lett. 345, 14-16, 1994
A;Title: Human progelatinase A can be activated by matrilysin.
A;Reference number: S44432; MUID:94252395; PMID:8194591
A;Accession: S44432
A;Molecule type: protein
A;Residues: 110-115 <CRA>
A;Cross-references: UNIPARC:UPI0000172CED
R;Brown, D.; Chwa, M.; Escobar, M.; Kenney, M.C.
Exp. Eye Res. 52, 5-16, 1991
A;Title: Characterization of the major matrix degrading metalloproteinase of human corne
A;Reference number: A61498; MUID:91330998; PMID:1868885
A;Accession: A61498
A;Molecule type: protein
A;Residues: 'X',31,'X',33-46,'X',48-50,'Q' <BRO>
A;Cross-references: UNIPARC:UPI0000172CEE
A;Experimental source: corneal stroma
R;Itoh, Y.; Binner, S.; Nagase, H.
Biochem. J. 308, 645-651, 1995
A;Title: Steps involved in activation of the complex of pro-matrix metalloproteinase 2 (
A;Reference number: S55327; MUID:95290003; PMID:7772054
A;Accession: S55327
A;Molecule type: protein
A;Residues: 110-114 <ITO>
A;Cross-references: UNIPARC:UPI0000172CEF
C;Genetics:
A;Gene: GDB:MMP2; CLG4; CLG4A
A;Cross-references: GDB:120592; OMIM:120360
A;Map position: 16q13-16q13
A;Introns: 51/3; 127/2; 178/1; 220/1; 278/1; 336/1; 394/1; 446/1; 491/2; 537/1; 590/2; 6
C;Function:
A;Description: proteolytic cleavage of gelatin type I and collagen types IV, V, VII, and
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: extracellular matrix; fibroblast; glycoprotein; hydrolase; metalloproteinase
F;1-29/Domain: signal sequence #status predicted <SIG>
F;30-660/Product: progelatinase A #status predicted <PRO>
F;30-109/Domain: activation peptide #status predicted <ACT>
F;70-219,394-446/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;110-660/Product: gelatinase A #status predicted <MAT>
F;233-390/Region: collagen binding #status predicted
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;463-660/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted
F;469-660/Disulfide bonds: #status predicted
F;573,642/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 100.0%; Score 60; DB 1; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.0055;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 2
S70365
gelatinase A (EC 3.4.24.24) precursor - rabbit
N;Alternate names: matrix metalloproteinase-2; type IV collagenase
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 21-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
C;Accession: S70365
R;Matsumoto, S.; Katoh, M.; Watanabe, T.; Masuho, Y.
Biochim. Biophys. Acta 1307, 137-139, 1996
A;Title: Molecular cloning of rabbit matrix metalloproteinase-2 and its broad expression
A;Reference number: S70365; MUID:96283805; PMID:8679695
A;Accession: S70365
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <MAT>
A;Cross-references: UNIPROT:P50757; UNIPARC:UPI000012F23F; EMBL:D63579; NID:g944816; PIDN
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F2>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

Query Match 100.0%; Score 60; DB 2; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.0055;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 3
A42496
gelatinase A (EC 3.4.24.24) precursor - mouse
N;Alternate names: collagenase type IV, 72K
C;Species: Mus musculus (house mouse)
C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A42496
R;Reponen, P.; Sahlberg, C.; Huhtala, P.; Hurskainen, T.; Thesleff, I.; Tryggvason, K.
J. Biol. Chem. 267, 7856-7862, 1992
A;Title: Molecular cloning of murine 72-kDa type IV collagenase and its expression durin
A;Reference number: A42496; MUID:92218452; PMID:1373140
A;Accession: A42496
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <REP>
A;Cross-references: UNIPROT:P33434; UNIPARC:UPI000002777E; GB:M84324; NID:g198465; PIDN:
A;Note: sequence extracted from NCBI backbone (NCBIN:96943, NCBIP:96945)
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

Query Match 100.0%; Score 60; DB 2; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.0055;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 4
S34780

```
gelatinase A (EC 3.4.24.24) precursor - rat
N;Alternate names: collagenase type IV
C;Species: Rattus norvegicus (Norway rat)
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Accession: S34780; S32525
R;Lovett, D.H.
submitted to the EMBL Data Library, June 1993
A;Reference number: S34780
A;Accession: S34780
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-662 <LOV>
A;Cross-references: UNIPROT:P33436; UNIPARC:UPI000012F240; EMBL:X71466; NID:g311750; PID
R;Marti, H.P.; McNeil, L.; Davies, M.; Martin, J.; Lovett, D.H.
Biochem. J. 291, 441-446, 1993
A;Title: Homology cloning of rat 72 kDa type IV collagenase: cytokine and second-messeng
A;Reference number: S32525; MUID:93249363; PMID:7916617
A;Accession: S32525
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 'R',27-662 <MAR>
A;Cross-references: UNIPARC:UPI0000175D90; EMBL:X71466
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;233-274/Domain: fibronectin type II repeat homology <2F1>
F;291-332/Domain: fibronectin type II repeat homology <2F8>
F;349-390/Domain: fibronectin type II repeat homology <2F9>
F;465-662/Domain: hemopexin repeat homology <PXN>
F;102,403,407,413/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;403,407,413/Binding site: zinc, catalytic (His) (active) #status predicted
F;404/Active site: Glu #status predicted

  Query Match             100.0%;  Score 60;  DB 2;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.0055;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 5
S46492
gelatinase A (EC 3.4.24.24) precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S46492
R;Aimes, R.T.; French, D.L.; Quigley, J.P.
Biochem. J. 300, 729-736, 1994
A;Title: Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from chicken embryo f
A;Reference number: S46492; MUID:94280397; PMID:8010954
A;Accession: S46492
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-663 <AIM>
A;Cross-references: UNIPROT:Q90611; UNIPARC:UPI000012F23E; EMBL:U07775; NID:g504475; PID
A;Note: in the authors' translation 205-Asp is shown after residue 201 and, consequently
C;Superfamily: gelatinase A; fibronectin type II repeat homology; hemopexin repeat homol
C;Keywords: hydrolase; metalloproteinase; zinc; zymogen
F;67-216,391-443/Domain: matrix metalloproteinase homology #status atypical <MMP>
F;230-271/Domain: fibronectin type II repeat homology <2F1>
F;288-329/Domain: fibronectin type II repeat homology <2F8>
F;346-387/Domain: fibronectin type II repeat homology <2F9>
F;466-663/Domain: hemopexin repeat homology <PXN>
F;99,400,404,410/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status
F;400,404,410/Binding site: zinc, catalytic (His) (active) #status predicted
F;401/Active site: Glu #status predicted

  Query Match             100.0%;  Score 60;  DB 1;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.0055;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 6
A23715
gelatinase (EC 3.4.24.-) - chicken (fragments)
C;Species: Gallus gallus (chicken)
C;Date: 21-Feb-1992 #sequence_revision 21-Feb-1992 #text_change 21-Mar-1996
C;Accession: A23715
R;Chen, J.M.; Aimes, R.T.; Ward, G.R.; Youngleib, G.L.; Quigley, J.P.
J. Biol. Chem. 266, 5113-5121, 1991
A;Title: Isolation and characterization of a 70-kDa metalloprotease (gelatinase) that is
A;Reference number: A23715; MUID:91161603; PMID:1848240
A;Accession: A23715
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-31 <CHE>
A;Cross-references: UNIPARC:UPI000017C00A
C;Keywords: hydrolase; metalloproteinase

  Query Match             80.0%;  Score 48;  DB 2;  Length 31;
  Best Local Similarity   88.9%;  Pred. No. 0.038;
  Matches    8;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKPK 10
              ||||| |||
Db         16 YNFFPXKPK 24


RESULT 7
F72430
NADP-reducing hydrogenase, subunit A - Thermotoga maritima (strain MSB8)
C;Species: Thermotoga maritima
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
C;Accession: F72430
R;Nelson, K.E.; Clayton, R.A.; Gill, S.R.; Gwinn, M.L.; Dodson, R.J.; Haft, D.H.; Hickey
Garrett, M.M.; Stewart, A.M.; Cotton, M.D.; Pratt, M.S.; Phillips, C.A.; Richardson, D.;
 C.M.
Nature 399, 323-329, 1999
A;Title: Evidence for lateral gene transfer between Archaea and Bacteria from genome seq
A;Reference number: A72200; MUID:99287316; PMID:10360571
A;Accession: F72430
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-176 <ARN>
A;Cross-references: UNIPROT:Q9WXM7; UNIPARC:UPI00000D3AC4; GB:AE001689; GB:AE000512; NID
A;Experimental source: strain MSB8
C;Genetics:
A;Gene: TM0012
C;Superfamily: NADH dehydrogenase (ubiquinone) I chain E; NADH dehydrogenase (ubiquinone
C;Keywords: 2Fe-2S; metalloprotein
F;98,103,139,143/Binding site: 2Fe-2S cluster (Cys) (covalent) #status predicted

  Query Match             66.7%;  Score 40;  DB 2;  Length 176;
  Best Local Similarity   77.8%;  Pred. No. 6.1;
  Matches    7;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKPK 10
              ||||  |||
Db         82 YNFFSTKPK 90


RESULT 8
H71086
hypothetical protein PH0957 - Pyrococcus horikoshii
C;Species: Pyrococcus horikoshii
C;Date: 14-Aug-1998 #sequence_revision 14-Aug-1998 #text_change 12-Jul-2004
C;Accession: H71086
R;Kawarabayasi, Y.; Sawada, M.; Horikawa, H.; Haikawa, Y.; Hino, Y.; Yamamoto, S.; Sekin
 M.; Ohfuku, Y.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; Kushida, N.; Oguchi
DNA Res. 5, 55-76, 1998
A;Title: Complete sequence and gene organization of the genome of a hyper-thermophilic a
```

```
A;Reference number: A71000; MUID:98344137; PMID:9679194
A;Accession: H71086
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-121 <KAW>
A;Cross-references: UNIPROT:O58660; UNIPARC:UPI0000062F59; GB:AP000004; NID:g3236131; PI
A;Experimental source: strain OT3
A;Note: this accession replaces an interim accession for a sequence replaced by GenBank
C;Genetics:
A;Gene: PH0957

  Query Match             65.0%;  Score 39;  DB 2;  Length 121;
  Best Local Similarity   85.7%;  Pred. No. 6.4;
  Matches    6;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPR 7
              |:|||||
Db         52 NFNFFPR 58


RESULT 9
S23802
homeotic protein lim-1 - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 22-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 09-Jul-2004
C;Accession: S23802
R;Taira, M.; Jamrich, M.; Good, P.J.; Dawid, I.B.
Genes Dev. 6, 356-366, 1992
A;Title: The LIM domain-containing homeo box gene Xlim-1 is expressed specifically in th
A;Reference number: S23802; MUID:92192449; PMID:1347750
A;Accession: S23802
A;Molecule type: mRNA
A;Residues: 1-403 <TAI>
A;Cross-references: UNIPROT:P29674; UNIPARC:UPI000012E658; EMBL:X63889; NID:g64829; PIDN
C;Genetics:
A;Gene: lim-1
C;Superfamily: homeotic protein lim-1; homeobox homology; LIM metal-binding repeat homol
C;Keywords: DNA binding; duplication; embryo; homeobox; nucleus; transcription regulatic
F;4-54/Domain: LIM metal-binding repeat homology <LIM1>
F;63-117/Domain: LIM metal-binding repeat homology <LIM2>
F;180-236/Domain: homeobox homology <HOX>

  Query Match             65.0%;  Score 39;  DB 1;  Length 403;
  Best Local Similarity   66.7%;  Pred. No. 21;
  Matches    6;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKP 9
              ||:|||: |
Db        291 NYDFFPQGP 299


RESULT 10
G01507
LIM domain transcription factor LIM-1 - human
N;Alternate names: homeotic protein lim-1
C;Species: Homo sapiens (man)
C;Date: 21-Dec-1996 #sequence_revision 06-Jun-1997 #text_change 09-Jul-2004
C;Accession: G01507
R;Dong, W.
submitted to the EMBL Data Library, September 1994
A;Reference number: G07570
A;Accession: G01507
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-404 <DON>
A;Cross-references: UNIPROT:P48742; UNIPARC:UPI000012E657; EMBL:U14755; NID:g549845; PID
C;Genetics:
A;Gene: hLIM-1
C;Superfamily: homeotic protein lim-1; homeobox homology; LIM metal-binding repeat homol
C;Keywords: DNA binding; duplication; embryo; homeobox; nucleus; transcription regulatic
F;4-54/Domain: LIM metal-binding repeat homology <LIM1>
F;63-117/Domain: LIM metal-binding repeat homology <LIM2>
F;181-237/Domain: homeobox homology <HOX>

  Query Match             65.0%;  Score 39;  DB 2;  Length 404;
  Best Local Similarity   66.7%;  Pred. No. 21;
  Matches    6;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKP 9
              ||:|||: |
Db        290 NYDFFPQGP 298


RESULT 11
I58187
homeotic protein lim-1 - rat
C;Species: Rattus sp. (rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 16-Jul-1999
C;Accession: I58187
R;Furuyama, T.; Inagaki, S.; Iwahashi, Y.; Takagi, H.
Neurosci. Lett. 170, 266-268, 1994
A;Title: Distribution of Rlim, an LIM homeodomain gene, in the rat brain.
A;Reference number: I58187; MUID:94336075; PMID:7914684
A;Accession: I58187
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-406 <RES>
A;Cross-references: UNIPARC:UPI0000021621; GB:S71523; NID:g559635; PIDN:AAC60696.1; PID:
C;Genetics:
A;Gene: lim-1
C;Superfamily: homeotic protein lim-1; homeobox homology; LIM metal-binding repeat homol
C;Keywords: DNA binding; duplication; embryo; homeobox; nucleus; transcription regulatio
F;4-54/Domain: LIM metal-binding repeat homology <LIM1>
F;63-117/Domain: LIM metal-binding repeat homology <LIM2>
F;181-237/Domain: homeobox homology <HOX>

  Query Match             65.0%;  Score 39;  DB 1;  Length 406;
  Best Local Similarity   66.7%;  Pred. No. 21;
  Matches    6;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKP 9
              ||:|||: |
Db        292 NYDFFPQGP 300


RESULT 12
I48186
homeotic protein lim-1 - golden hamster
N;Alternate names: homeotic protein lmx2
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I48186
R;Rudnick, A.; Ling, T.Y.; Odagiri, H.; Rutter, W.J.; German, M.S.
Proc. Natl. Acad. Sci. U.S.A. 91, 12203-12207, 1994
A;Title: Pancreatic beta cells express a diverse set of homeobox genes.
A;Reference number: I48185; MUID:95083670; PMID:7991607
A;Accession: I48186
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-406 <RES>
A;Cross-references: UNIPROT:P36199; UNIPARC:UPI0000021621; EMBL:X81407; NID:g587462; PIDN
C;Genetics:
A;Gene: lmx2
C;Superfamily: homeotic protein lim-1; homeobox homology; LIM metal-binding repeat homol
C;Keywords: DNA binding; duplication; embryo; homeobox; nucleus; transcription regulatio
F;4-54/Domain: LIM metal-binding repeat homology <LIM1>
F;63-117/Domain: LIM metal-binding repeat homology <LIM2>
F;181-237/Domain: homeobox homology <HOX>

  Query Match             65.0%;  Score 39;  DB 1;  Length 406;
  Best Local Similarity   66.7%;  Pred. No. 21;
  Matches    6;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKP 9
              ||:|||: |
Db        292 NYDFFPQGP 300
```

RESULT 13
I48637
homeotic protein lim-1 - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I48637; S42788
R;Fujii, T.; Pichel, J.G.; Taira, M.; Toyama, R.; Dawid, I.B.; Westphal, H.
Dev. Dyn. 199, 73-83, 1994
A;Title: Expression patterns of the murine LIM class homeobox gene lim1 in the developir
A;Reference number: I48637; MUID:94220754; PMID:7909459
A;Accession: I48637
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-406 <RES>
A;Cross-references: UNIPROT:P36199; UNIPARC:UPI0000021621; EMBL:Z27410; NID:g425216; PID
R;Fujii, T.
submitted to the EMBL Data Library, November 1993
A;Reference number: S42788
A;Accession: S42788
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-406 <FUJ>
A;Cross-references: UNIPARC:UPI0000021621; EMBL:Z27410; NID:g425216; PIDN:CAA81797.1; PI
C;Genetics:
A;Gene: Lhx1
C;Superfamily: homeotic protein lim-1; homeobox homology; LIM metal-binding repeat homol
C;Keywords: DNA binding; duplication; embryo; homeobox; nucleus; transcription regulatic
F;4-54/Domain: LIM metal-binding repeat homology <LIM1>
F;63-117/Domain: LIM metal-binding repeat homology <LIM2>
F;181-237/Domain: homeobox homology <HOX>

  Query Match 65.0%; Score 39; DB 1; Length 406;
  Best Local Similarity 66.7%; Pred. No. 21;
  Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 NYNFFPRKP 9
||:|||: |
Db 292 NYDFFPQGP 300

RESULT 14
S55948
hypothetical protein YLR392c - yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein L8084.13
C;Species: Saccharomyces cerevisiae
C;Date: 23-Aug-1995 #sequence_revision 19-Oct-1995 #text_change 09-Jul-2004
C;Accession: S55948; C36445
R;Du, Z.
submitted to the EMBL Data Library, January 1995
A;Description: The sequence of S. cerevisiae cosmid 8084.
A;Reference number: S55944
A;Accession: S55948
A;Molecule type: DNA
A;Residues: 1-518 <DUZ>
A;Cross-references: UNIPROT:P18634; UNIPARC:UPI000013B7E7; EMBL:U19729; NID:g625097; PID
A;Experimental source: strain S288C (AB972)
R;Ackerman, S.H.; Tzagoloff, A.
J. Biol. Chem. 265, 9952-9959, 1990
A;Title: ATP10, a yeast nuclear gene required for the assembly of the mitochondrial F-1-
A;Reference number: A36445; MUID:90277691; PMID:2141026
A;Accession: C36445
A;Molecule type: DNA
A;Residues: 1-210 <ACK>
A;Cross-references: UNIPARC:UPI0000168B0F; GB:J05463; NID:g1431794; PIDN:AAB05631.1; PID
A;Experimental source: strain D273-10B/A1
C;Genetics:
A;Cross-references: SGD:S0004384
A;Map position: 12R

  Query Match 65.0%; Score 39; DB 2; Length 518;
  Best Local Similarity 57.1%; Pred. No. 27;
  Matches 8; Conservative 2; Mismatches 0; Indels 4; Gaps 1;

Qy 1 NYNF----FPRKPK 10
||:| |||||:
Db 111 NYSFQFDKFPRKPE 124

RESULT 15
H69141
hypothetical protein MTH326 - Methanobacterium thermoautotrophicum (strain Delta H)
C;Species: Methanobacterium thermoautotrophicum
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
C;Accession: H69141
R;Smith, D.R.; Doucette-Stamm, L.A.; Deloughery, C.; Lee, H.; Dubois, J.; Aldredge, T.;
; Qiu, D.; Spadafora, R.; Vicaire, R.; Wang, Y.; Wierzbowski, J.; Gibson, R.; Jiwani, N
ki, S.; Church, G.M.; Daniels, C.J.; Mao, J.; Rice, P.; Noelling, J.; Reeve, J.N.
J. Bacteriol. 179, 7135-7155, 1997
A;Title: Complete genome sequence of Methanobacterium thermoautotrophicum Delta H: funct
A;Reference number: A69000; MUID:98037514; PMID:9371463
A;Accession: H69141
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-957 <MTH>
A;Cross-references: UNIPROT:O26426; UNIPARC:UPI0000062AD5; GB:AE000817; GB:AE000666; NID
A;Experimental source: strain Delta H
C;Genetics:
A;Gene: MTH326
C;Superfamily: Methanobacterium thermoautotrophicum hypothetical protein MTH326

  Query Match 65.0%; Score 39; DB 2; Length 957;
  Best Local Similarity 66.7%; Pred. No. 50;
  Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 NYNFFPRKP 9
:|||:| ||
Db 785 HYNFYPIKP 793

Search completed: February 21, 2006, 08:01:09
Job time : 17.5263 secs

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:31:04 ; Search time 100.263 Seconds
(without alignments)
70.368 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 18

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	112	2	Q9N1T9_CANFA	Q9n1t9 canis famil
2	60	100.0	223	2	Q4KLF6_XENLA	Q4klf6 xenopus lae
3	60	100.0	385	2	Q9TUL8_HORSE	Q9tul8 equus cabal
4	60	100.0	559	2	Q7SYA5_XENLA	Q7sya5 xenopus lae
5	60	100.0	595	2	Q6GQI1_XENLA	Q6gqi1 xenopus lae
6	60	100.0	632	2	Q9N1P6_CANFA	Q9n1p6 canis famil
7	60	100.0	654	2	Q6U7G9_MELGA	Q6u7g9 meleagris g
8	60	100.0	655	2	Q5FVW8_XENTR	Q5fvw8 xenopus tro
9	60	100.0	656	2	Q8UUZ3_XENLA	Q8uuz3 xenopus lae
10	60	100.0	660	1	MMP2_HUMAN	P08253 homo sapien
11	60	100.0	660	2	Q5IY21_TUPGB	Q5iy21 tupaia glis
12	60	100.0	661	2	Q95JA4_PIG	Q95ja4 sus scrofa
13	60	100.0	661	2	Q9GLE5_BOVIN	Q9gle5 bos taurus
14	60	100.0	662	1	MMP2_MOUSE	P33434 mus musculu
15	60	100.0	662	1	MMP2_RABIT	P50757 oryctolagus
16	60	100.0	662	1	MMP2_RAT	P33436 rattus norv
17	60	100.0	662	2	Q6GMM9_RAT	Q6gmm9 rattus norv
18	60	100.0	663	1	MMP2_CHICK	Q90611 gallus gall

ALIGNMENTS

RESULT 1
Q9N1T9_CANFA
ID Q9N1T9_CANFA PRELIMINARY; PRT; 112 AA.
AC Q9N1T9;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Matrix metalloproteinase-2 (Fragment).
GN Name=MMP-2;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Fibrosarcoma;
RA Jahic H., Kitchell B.E., Paria B.C.;
RL Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AF147750; AAF67001.1; -; mRNA.
DR HSSP; P08253; 1GXD.
DR MEROPS; M10.003; -.
DR Ensembl; ENSCAFG00000009421; Canis familiaris.
DR GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000794; Ketoacyl_synth.
DR InterPro; IPR001818; Pept_M10A_M12B.
DR Pfam; PF03933; Peptidase_M10_N; 1.
DR PROSITE; PS00606; B_KETOACYL_SYNTHASE; UNKNOWN_1.
DR PROSITE; PS00546; CYSTEINE_SWITCH; 1.
FT NON_TER 1 1
FT NON_TER 112 112
SQ SEQUENCE 112 AA; 12110 MW; 7FD7259CAACD9617 CRC64;

Query Match 100.0%; Score 60; DB 2; Length 112;
Best Local Similarity 100.0%; Pred. No. 0.0069;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 103 NYNFFPRKPK 112

RESULT 2
Q4KLF6_XENLA
ID Q4KLF6_XENLA PRELIMINARY; PRT; 223 AA.
AC Q4KLF6;
DT 13-SEP-2005 (TrEMBLrel. 31, Created)
DT 13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE Hypothetical protein.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC Xenopodinae; Xenopus; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA Richardson P.;
RT "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT initiative.";
RL Dev. Dyn. 225:384-391(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Whole;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

```
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Gerhard D.S.;
RL   Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC099241; AAH99241.1; -; mRNA.
KW   Hypothetical protein.
SQ   SEQUENCE   223 AA;  25889 MW;  AB815A358ECD68F1 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 223;
  Best Local Similarity   100.0%;  Pred. No. 0.014;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        105 NYNFFPRKPK 114


RESULT 3
Q9TUL8_HORSE
ID   Q9TUL8_HORSE PRELIMINARY;      PRT;   385 AA.
AC   Q9TUL8;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Matrix metalloproteinase-2 (Fragment).
GN   Name=mmp-2;
OS   Equus caballus (Horse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
OX   NCBI_TaxID=9796;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Hoof tissue;
RA   Kyaw-Tanner M.T., Mungall B.A., Pollitt C.C.;
RL   Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ243311; CAB46656.1; -; mRNA.
DR   HSSP; P08253; 1CXW.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER       1      1
FT   NON_TER     385    385
SQ   SEQUENCE   385 AA;  42946 MW;  B36FBDA638EA7072 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 385;
  Best Local Similarity   100.0%;  Pred. No. 0.025;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 4
Q7SYA5_XENLA
ID   Q7SYA5_XENLA PRELIMINARY;      PRT;   559 AA.
AC   Q7SYA5;
DT   01-OCT-2003 (TrEMBLrel. 25, Created)
DT   01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Mmp2-prov protein.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole;
RA   Klein S., Strausberg R.;
RL   Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC054947; AAH54947.1; -; mRNA.
DR   HSSP; P08253; 1HOV.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 2.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
```

```
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 2.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   559 AA;  63084 MW;  F27BD8ACE59E4B52 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 559;
  Best Local Similarity   100.0%;  Pred. No. 0.037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        105 NYNFFPRKPK 114


RESULT 5
Q6GQI1_XENLA
ID   Q6GQI1_XENLA PRELIMINARY;      PRT;   595 AA.
AC   Q6GQI1;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2-prov protein (Fragment).
GN   Name=mmp2-prov;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RX   MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
RA   Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA   Richardson P.;
RT   "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT   initiative.";
RL   Dev. Dyn. 225:384-391(2002).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Spleen;
RA   Klein S., Strausberg R.;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC072762; AAH72762.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 3.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER     595    595
SQ   SEQUENCE   595 AA;  67335 MW;  688556DF6039FF83 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 595;
  Best Local Similarity   100.0%;  Pred. No. 0.04;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        105 NYNFFPRKPK 114


RESULT 6
Q9N1P6_CANFA
ID   Q9N1P6_CANFA PRELIMINARY;      PRT;   632 AA.
AC   Q9N1P6;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase-2 (Fragment).
GN   Name=MMP-2;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC   Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Fibrosarcoma;
RA   Jahic H., Paria B., Balkin R., Baxendale V., Fang Y., Kitchell B.;
RL   Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF177217; AAF67517.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSCAFG00000009421; Canis familiaris.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
```

```
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
FT   NON_TER       1      1
SQ   SEQUENCE   632 AA;  70991 MW;  D8AE895497E129F3 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 632;
  Best Local Similarity   100.0%;  Pred. No. 0.043;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         81 NYNFFPRKPK 90


RESULT 7
Q6U7G9_MELGA
ID   Q6U7G9_MELGA PRELIMINARY;      PRT;   654 AA.
AC   Q6U7G9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Gelatinase A.
OS   Meleagris gallopavo (Common turkey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Meleagris.
OX   NCBI_TaxID=9103;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Monsonego Ornan E., Tong A.;
RL   Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY376899; AAQ98971.1; -; mRNA.
DR   HSSP; P08254; 1B3D.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 3.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   654 AA;  73956 MW;  F9B0755F76B6F8DD CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 654;
  Best Local Similarity   100.0%;  Pred. No. 0.044;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 8
Q5FVW8_XENTR
ID   Q5FVW8_XENTR PRELIMINARY;      PRT;   655 AA.
AC   Q5FVW8;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   MGC108375 protein.
GN   Name=MGC108375;
OS   Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Silurana.
OX   NCBI_TaxID=8364;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Whole body;
RA   Klein S., Gerhard D.S.;
RL   Submitted (FEB-2005) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC089734; AAH89734.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR002477; PGBD_1.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   655 AA;  74345 MW;  2AFD4C93786A625C CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 655;
  Best Local Similarity   100.0%;  Pred. No. 0.044;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
```

```
Db        104 NYNFFPRKPK 113


RESULT 9
Q8UUZ3_XENLA
ID   Q8UUZ3_XENLA PRELIMINARY;      PRT;   656 AA.
AC   Q8UUZ3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloproteinase.
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=21888509; PubMed=11891989; DOI=10.1002/dvdy.10069;
RA   Jung J.C., Leco K.J., Edwards D.R., Fini M.E.;
RT   "Matrix metalloproteinases mediate the dismantling of mesenchymal
RT   structures in the tadpole tail during thyroid hormone-induced tail
RT   resorption.";
RL   Dev. Dyn. 223:402-413(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RA   Leco K., Jung J.-C., Fini M., Edwards D.R.;
RL   Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY037943; AAL01591.1; -; mRNA.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 2.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   656 AA;  74272 MW;  50C28A99C427F51D CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 656;
  Best Local Similarity   100.0%;  Pred. No. 0.044;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        105 NYNFFPRKPK 114


RESULT 10
MMP2_HUMAN
ID   MMP2_HUMAN     STANDARD;      PRT;   660 AA.
AC   P08253;
DT   01-AUG-1988 (Rel. 08, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A) (TBE-
DE   1).
GN   Name=MMP2; Synonyms=CLG4A;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC   Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE OF 19-660, AND PARTIAL PROTEIN SEQUENCE.
RX   MEDLINE=88198218; PubMed=2834383;
RA   Collier I.E., Wilhelm S.M., Eisen A.Z., Marmer B.L., Grant G.A.,
RA   Seltzer J.L., Kronberger A., He C., Bauer E.A., Goldberg G.I.;
RT   "H-ras oncogene-transformed human bronchial epithelial cells (TBE-1)
RT   secrete a single metalloprotease capable of degrading basement
RT   membrane collagen.";
RL   J. Biol. Chem. 263:6579-6587(1988).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=91236162; PubMed=1851724;
RA   Collier I.E., Bruns G.A.P., Goldberg G.I., Gerhard D.S.;
RT   "On the structure and chromosome location of the 72- and 92-kDa human
RT   type IV collagenase genes.";
RL   Genomics 9:429-434(1991).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=90293047; PubMed=2162831;
RA   Huhtala P., Chow L.T., Tryggvason K.;
RT   "Structure of the human type IV collagenase gene.";
RL   J. Biol. Chem. 265:11077-11082(1990).
RN   [4]
RP   NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANTS VAL-447 AND LEU-621.
RA   Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N.,
RA   Nguyen C.P., Nguyen D.A., Poel C.L., Chambers S.W., Schackwitz W.S.,
RA   Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.;
RT   "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department
RT   of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).";
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
RN   [5]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [6]
RP   NUCLEOTIDE SEQUENCE OF 1-51.
RX   MEDLINE=90228972; PubMed=2158484;
RA   Huhtala P., Eddy R.L., Fan Y.S., Byers M.G., Shows T.B.,
RA   Tryggvason K.;
RT   "Completion of the primary structure of the human type IV collagenase
RT   preproenzyme and assignment of the gene (CLG4) to the q21 region of
RT   chromosome 16.";
RL   Genomics 6:554-559(1990).
RN   [7]
RP   ENZYME REGULATION.
RX   PubMed=11179305; DOI=10.1128/IAI.69.3.1402-1408.2001;
```

```
RA   Gusman H., Travis J., Helmerhorst E.J., Potempa J., Troxler R.F.,
RA   Oppenheim F.G.;
RT   "Salivary histatin 5 is an inhibitor of both host and bacterial
RT   enzymes implicated in periodontal disease.";
RL   Infect. Immun. 69:1402-1408(2001).
RN   [8]
RP   PROCESSING OF KISS1.
RX   MEDLINE=22761370; PubMed=12879005; DOI=10.1038/sj.onc.1206542;
RA   Takino T., Koshikawa N., Miyamori H., Tanaka M., Sasaki T., Okada Y.,
RA   Seiki M., Sato H.;
RT   "Cleavage of metastasis suppressor gene product KiSS-1
RT   protein/metastin by matrix metalloproteinases.";
RL   Oncogene 22:4617-4626(2003).
RN   [9]
RP   X-RAY CRYSTALLOGRAPHY (2.15 ANGSTROMS) OF 443-660.
RX   MEDLINE=96069777; PubMed=7583664;
RA   Libson A.M., Gittis A.G., Collier I.E., Marmer B.L., Goldberg G.I.,
RA   Lattman E.E.;
RT   "Crystal structure of the haemopexin-like C-terminal domain of
RT   gelatinase A.";
RL   Nat. Struct. Biol. 2:938-942(1995).
RN   [10]
RP   X-RAY CRYSTALLOGRAPHY (2.6 ANGSTROMS) OF 458-660.
RX   MEDLINE=96140723; PubMed=8549817; DOI=10.1016/0014-5793(95)01435-7;
RA   Gohlke U., Gomis-Rueth F.-X., Crabbe T., Murphy G., Docherty A.J.,
RA   Bode W.;
RT   "The C-terminal (haemopexin-like) domain structure of human gelatinase
RT   A (MMP2): structural implications for its function.";
RL   FEBS Lett. 378:126-130(1996).
CC   -!- FUNCTION: In addition to gelatin and collagens, it cleaves KiSS1
CC       at a Gly-|-Leu bond.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit.
CC   -!- COFACTOR: Binds 2 zinc ions per subunit.
CC   -!- ENZYME REGULATION: Inhibited by histatin-3 1/24 (histatin-5).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; J03210; AAA35701.1; -; mRNA.
DR   EMBL; M33789; AAA52027.1; -; Genomic_DNA.
DR   EMBL; M55593; AAA52028.1; -; Genomic_DNA.
DR   EMBL; M58552; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55582; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55583; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55584; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55585; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55586; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55587; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55588; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55589; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55590; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55591; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; M55592; AAA52028.1; JOINED; Genomic_DNA.
DR   EMBL; AY738117; AAU10089.1; -; Genomic_DNA.
DR   EMBL; BC002576; AAH02576.1; -; mRNA.
DR   PIR; A28153; A28153.
DR   PDB; 1CK7; X-ray; A=30-660.
DR   PDB; 1CXW; NMR; A=278-336.
DR   PDB; 1EAK; X-ray; A/B/C/D=32-452.
DR   PDB; 1GEN; X-ray; @=443-660.
DR   PDB; 1GXD; X-ray; A/B=30-660.
DR   PDB; 1HOV; NMR; A=110-214.
DR   PDB; 1J7M; NMR; A=337-394.
DR   PDB; 1KS0; NMR; A=223-282.
DR   PDB; 1QIB; X-ray; A=115-216.
DR   PDB; 1RTG; X-ray; @=451-660.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSG00000087245; Homo sapiens.
DR   HGNC; HGNC:7166; MMP2.
DR   H-InvDB; HIX0013041; -.
DR   MIM; 120360; -.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0004228; F:gelatinase A activity; TAS.
DR   GO; GO:0008270; F:zinc ion binding; TAS.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   3D-structure; Calcium; Collagen degradation;
KW   Direct protein sequencing; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Polymorphism; Protease;
KW   Repeat; Signal; Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP      30    109       Activation peptide.
FT   CHAIN       110    660       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      466    660       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.

  Query Match             100.0%;  Score 60;  DB 1;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 11
Q5IY21_TUPGB
ID   Q5IY21_TUPGB PRELIMINARY;      PRT;   660 AA.
AC   Q5IY21;
DT   10-MAY-2005 (TrEMBLrel. 30, Created)
DT   10-MAY-2005 (TrEMBLrel. 30, Last sequence update)
DT   10-MAY-2005 (TrEMBLrel. 30, Last annotation update)
DE   Matrix metalloproteinase 2.
OS   Tupaia glis belangeri (Common tree shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Scandentia; Tupaiidae; Tupaia.
OX   NCBI_TaxID=37347;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   PubMed=15621657; DOI=10.1080/10425170400012925;
RA   Kenning M.S., Gentle A., McBrien N.A.;
```

```
RT   "Expression and cDNA sequence of matrix metalloproteinase-2 (MMP-2) in
RT   a mammalian model of human disease processes: Tupaia belangeri.";
RL   DNA Seq. 15:332-337(2004).
DR   EMBL; AY600958; AAT44903.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 2.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   660 AA;  73871 MW;  FC7EB8481091C5ED CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 12
Q95JA4_PIG
ID   Q95JA4_PIG  PRELIMINARY;      PRT;   661 AA.
AC   Q95JA4;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Gelatinase A.
GN   Name=MMP-2;
OS   Sus scrofa (Pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC   Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Tooth enamel organ;
RX   MEDLINE=21480581; PubMed=11597028;
RA   Caron C., Xue J., Sun X., Simmer J.P., Bartlett J.D.;
RT   "Gelatinase A (MMP-2) in developing tooth tissues and amelogenin
RT   hydrolysis.";
RL   J. Dent. Res. 80:1660-1664(2001).
DR   EMBL; AF295805; AAK97133.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SQ   SEQUENCE   661 AA;  73669 MW;  41CD448BD72D2CC2 CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        110 NYNFFPRKPK 119


RESULT 13
Q9GLE5_BOVIN
ID   Q9GLE5_BOVIN PRELIMINARY;      PRT;   661 AA.
AC   Q9GLE5;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Matrix metalloprotease 2.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC   Pecora; Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RA   Yan L., Zhang B., Tsang P., Fang J., Yu Y., Ingber D.E., Moses M.A.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF290428; AAG28169.1; -; mRNA.
DR   HSSP; P08253; 1GXD.
DR   MEROPS; M10.003; -.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_Type_II.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR006026; Peptidase_M.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FIBRONECTIN_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
KW   Metalloprotease; Protease.
SQ   SEQUENCE   661 AA;  73776 MW;  90545F7645E5F84D CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 661;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        110 NYNFFPRKPK 119


RESULT 14
MMP2_MOUSE
ID   MMP2_MOUSE     STANDARD;      PRT;   662 AA.
AC   P33434;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=92218452; PubMed=1373140;
RA   Reponen P., Sahlberg C., Huhtala P., Hurskainen T., Thesleff I.,
RA   Tryggvason K.;
RT   "Molecular cloning of murine 72-kDa type IV collagenase and its
RT   expression during mouse development.";
RL   J. Biol. Chem. 267:7856-7862(1992).
RN   [2]
RP   NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC   STRAIN=C57BL/6; TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [3]
RP   DEVELOPMENTAL STAGE.
RC   TISSUE=Embryo;
RX   PubMed=2744464;
RA   Brenner C.A., Adler R.R., Rappolee D.A., Pedersen R.A., Werb Z.;
RT   "Genes for extracellular-matrix-degrading metalloproteinases and their
RT   inhibitor, TIMP, are expressed during early mammalian development.";
RL   Genes Dev. 3:848-859(1989).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- DEVELOPMENTAL STAGE: Present in unfertilized eggs and at the
CC       zygote and cleavage stages. Levels increase at the blastocyst
CC       stage and with endoderm differentiation.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ----------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ----------------------------------------------------------------------
DR   EMBL; M84324; AAA39338.1; -; mRNA.
DR   EMBL; BC070430; AAH70430.1; -; mRNA.
DR   PIR; A42496; A42496.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSMUSG00000031740; Mus musculus.
DR   MGI; MGI:97009; Mmp2.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    662       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      468    662       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.
FT   REGION      222    396       Collagen-binding.
FT   REGION      397    467       Collagenase-like 2.
FT   ACT_SITE    404    404       By similarity.
FT   METAL       134    134       Calcium 1 (By similarity).
FT   METAL       168    168       Calcium 2 (By similarity).
FT   METAL       178    178       Zinc 1 (By similarity).
FT   METAL       180    180       Zinc 1 (By similarity).
FT   METAL       185    185       Calcium 3 (By similarity).
FT   METAL       186    186       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       193    193       Zinc 1 (By similarity).
FT   METAL       200    200       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       202    202       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       204    204       Calcium 2 (By similarity).
FT   METAL       206    206       Zinc 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       209    209       Calcium 1 (By similarity).
FT   METAL       211    211       Calcium 3 (By similarity).
FT   METAL       403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL       407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL       413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL       478    478       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
```

```
FT   METAL       523    523       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       571    571       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       620    620       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE        102    102       Cysteine switch (Potential).
FT   CARBOHYD    575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID    471    662       By similarity.
SQ   SEQUENCE   662 AA;  74102 MW;  C630A7DBDB272F02 CRC64;

  Query Match             100.0%;  Score 60;  DB 1;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 15
MMP2_RABIT
ID   MMP2_RABIT     STANDARD;      PRT;   662 AA.
AC   P50757;
DT   01-OCT-1996 (Rel. 34, Created)
DT   01-OCT-1996 (Rel. 34, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC   Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Japanese white; TISSUE=Articular joint;
RX   MEDLINE=96283805; PubMed=8679695; DOI=10.1016/0167-4781(96)00050-4;
RA   Matsumoto S., Katoh M., Watanabe T., Masuho Y.;
RT   "Molecular cloning of rabbit matrix metalloproteinase-2 and its broad
RT   expression at several tissues.";
RL   Biochim. Biophys. Acta 1307:137-139(1996).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; D63579; BAA09796.1; -; mRNA.
DR   PIR; S70365; S70365.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL        1     29       Potential.
FT   PROPEP       30    109       Activation peptide.
FT   CHAIN       110    662       72 kDa type IV collagenase.
FT   DOMAIN      228    276       Fibronectin type-II 1.
FT   DOMAIN      286    334       Fibronectin type-II 2.
FT   DOMAIN      344    392       Fibronectin type-II 3.
FT   DOMAIN      468    662       Hemopexin-like.
FT   REGION      110    221       Collagenase-like 1.
FT   REGION      222    396       Collagen-binding.
FT   REGION      397    467       Collagenase-like 2.
FT   ACT_SITE    404    404       By similarity.
FT   METAL       134    134       Calcium 1 (By similarity).
FT   METAL       168    168       Calcium 2 (By similarity).
FT   METAL       178    178       Zinc 1 (By similarity).
FT   METAL       180    180       Zinc 1 (By similarity).
FT   METAL       185    185       Calcium 3 (By similarity).
FT   METAL       186    186       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       193    193       Zinc 1 (By similarity).
FT   METAL       200    200       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       202    202       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       204    204       Calcium 2 (By similarity).
FT   METAL       206    206       Zinc 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       209    209       Calcium 1 (By similarity).
FT   METAL       211    211       Calcium 3 (By similarity).
FT   METAL       403    403       Zinc 2 (catalytic) (By similarity).
FT   METAL       407    407       Zinc 2 (catalytic) (By similarity).
FT   METAL       413    413       Zinc 2 (catalytic) (By similarity).
FT   METAL       478    478       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       523    523       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       571    571       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       620    620       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE        102    102       Cysteine switch (Potential).
FT   CARBOHYD    575    575       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    644    644       N-linked (GlcNAc. . .) (Potential).
FT   DISULFID    471    662       By similarity.
SQ   SEQUENCE   662 AA;  73803 MW;  1CC246B270E440C8 CRC64;

  Query Match             100.0%;  Score 60;  DB 1;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 16
MMP2_RAT
ID   MMP2_RAT       STANDARD;      PRT;   662 AA.
```

```
AC   P33436; P97581;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RX   MEDLINE=93249363; PubMed=7916617;
RA   Marti H.P., McNeil L., Davies M., Martin J., Lovett D.H.;
RT   "Homology cloning of rat 72 kDa type IV collagenase: cytokine and
RT   second-messenger inducibility in glomerular mesangial cells.";
RL   Biochem. J. 291:441-446(1993).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   STRAIN=Wistar; TISSUE=Skin;
RA   Okada A., Basset P.;
RT   "The cloning of the cDNA encoding rat gelatinase A from a rat skin
RT   wound cDNA library.";
RL   Submitted (JUL-1996) to the EMBL/GenBank/DDBJ databases.
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------
DR   EMBL; X71466; CAA50583.1; -; mRNA.
DR   EMBL; U65656; AAB41692.1; -; mRNA.
DR   PIR; S34780; S34780.
DR   HSSP; P08253; 1RTG.
DR   MEROPS; M10.003; -.
DR   RGD; 621316; Mmp2.
DR   GO; GO:0004228; F:gelatinase A activity; IDA.
DR   GO; GO:0008237; F:metallopeptidase activity; TAS.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Extracellular matrix; Glycoprotein;
KW   Hydrolase; Metal-binding; Metalloprotease; Protease; Repeat; Signal;
KW   Zinc; Zymogen.
FT   SIGNAL       1     29       Potential.
FT   PROPEP       30    109      Activation peptide.
FT   CHAIN        110   662      72 kDa type IV collagenase.
FT   DOMAIN       228   276      Fibronectin type-II 1.
FT   DOMAIN       286   334      Fibronectin type-II 2.
FT   DOMAIN       344   392      Fibronectin type-II 3.
FT   DOMAIN       468   662      Hemopexin-like.
FT   REGION       110   221      Collagenase-like 1.
FT   REGION       222   396      Collagen-binding.
FT   REGION       397   467      Collagenase-like 2.
FT   ACT_SITE     404   404      By similarity.
FT   METAL        134   134      Calcium 1 (By similarity).
FT   METAL        168   168      Calcium 2 (By similarity).
FT   METAL        178   178      Zinc 1 (By similarity).
FT   METAL        180   180      Zinc 1 (By similarity).
FT   METAL        185   185      Calcium 3 (By similarity).
FT   METAL        186   186      Calcium 3 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        193   193      Zinc 1 (By similarity).
FT   METAL        200   200      Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        202   202      Calcium 2 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        204   204      Calcium 2 (By similarity).
FT   METAL        206   206      Zinc 1 (By similarity).
FT   METAL        208   208      Calcium 3 (By similarity).
FT   METAL        209   209      Calcium 1 (By similarity).
FT   METAL        211   211      Calcium 3 (By similarity).
FT   METAL        403   403      Zinc 2 (catalytic) (By similarity).
FT   METAL        407   407      Zinc 2 (catalytic) (By similarity).
FT   METAL        413   413      Zinc 2 (catalytic) (By similarity).
FT   METAL        478   478      Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        523   523      Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        571   571      Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   METAL        620   620      Calcium 4 (via carbonyl oxygen) (By
FT                               similarity).
FT   SITE         102   102      Cysteine switch (Potential).
FT   CARBOHYD     575   575      N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     644   644      N-linked (GlcNAc. . .) (Potential).
FT   DISULFID     471   662      By similarity.
FT   CONFLICT      42    42      A -> S (in Ref. 2).
FT   CONFLICT     286   286      A -> G (in Ref. 2).
FT   CONFLICT     369   369      N -> S (in Ref. 2).
FT   CONFLICT     435   435      H -> N (in Ref. 2).
FT   CONFLICT     586   586      A -> S (in Ref. 2).
SQ   SEQUENCE   662 AA;  74182 MW;  7496B34B0A21884B CRC64;
```

Query Match 100.0%; Score 60; DB 1; Length 662;
Best Local Similarity 100.0%; Pred. No. 0.045;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118
```

```
RESULT 17
Q6GMM9_RAT
ID   Q6GMM9_RAT  PRELIMINARY;      PRT;   662 AA.
AC   Q6GMM9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mmp2 protein.
GN   Name=Mmp2;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
```

```
OC   Muroidea; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Lung;
RG   NIH MGC Project;
RL   Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC074013; AAH74013.1; -; mRNA.
DR   GO; GO:0005578; C:extracellular matrix (sensu Metazoa); IEA.
DR   GO; GO:0004222; F:metalloendopeptidase activity; IEA.
DR   GO; GO:0008270; F:zinc ion binding; IEA.
DR   GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Hydrolase; Metal-binding; Metalloprotease; Protease; Zinc.
SQ   SEQUENCE   662 AA;  74149 MW;  C56BD787473FC03E CRC64;

  Query Match             100.0%;  Score 60;  DB 2;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 18
MMP2_CHICK
ID   MMP2_CHICK     STANDARD;      PRT;   663 AA.
AC   Q90611;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   13-SEP-2005 (Rel. 48, Last annotation update)
DE   72 kDa type IV collagenase precursor (EC 3.4.24.24) (72 kDa
DE   gelatinase) (Matrix metalloproteinase-2) (MMP-2) (Gelatinase A).
GN   Name=MMP2;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Embryo;
RX   MEDLINE=94280397; PubMed=8010954;
RA   Aimes R.T., French D.L., Quigley J.P.;
RT   "Cloning of a 72 kDa matrix metalloproteinase (gelatinase) from
RT   chicken embryo fibroblasts using gene family PCR: expression of the
RT   gelatinase increases upon malignant transformation.";
RL   Biochem. J. 300:729-736(1994).
RN   [2]
RP   PROTEIN SEQUENCE OF 27-41 AND 107-122.
RX   MEDLINE=91161603; PubMed=1848240;
RA   Chen J.-M., Aimes R.T., Ward G.R., Youngleib G.L., Quigley J.P.;
RT   "Isolation and characterization of a 70-kDa metalloprotease
RT   (gelatinase) that is elevated in Rous sarcoma virus-transformed
RT   chicken embryo fibroblasts.";
RL   J. Biol. Chem. 266:5113-5121(1991).
CC   -!- CATALYTIC ACTIVITY: Cleavage of gelatin type I and collagen types
CC       IV, V, VII, X. Cleaves the collagen-like sequence Pro-Gln-Gly-|-
CC       Ile-Ala-Gly-Gln.
CC   -!- COFACTOR: Binds 4 calcium ions per subunit (By similarity).
CC   -!- COFACTOR: Binds 2 zinc ions per subunit (By similarity).
CC   -!- SUBUNIT: Ligand for integrin alpha-V/beta-3.
CC   -!- TISSUE SPECIFICITY: Produced by normal skin fibroblasts.
CC   -!- PTM: The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-
CC       MMP3) (By similarity).
CC   -!- SIMILARITY: Belongs to the peptidase M10A family.
CC   -!- SIMILARITY: Contains 3 fibronectin type-II domains.
CC   -!- SIMILARITY: Contains 1 hemopexin-like domain.
CC   ---------------------------------------------------------------------------
CC   This Swiss-Prot entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use as long as its content is in no way modified and this statement is not
CC   removed.
CC   ---------------------------------------------------------------------------
DR   EMBL; U07775; AAA19596.1; -; mRNA.
DR   PIR; S46492; S46492.
DR   HSSP; P08253; 1QIB.
DR   MEROPS; M10.003; -.
DR   Ensembl; ENSGALG00000003580; Gallus gallus.
DR   InterPro; IPR000562; FN_type2_col_bd.
DR   InterPro; IPR000585; Hemopexin.
DR   InterPro; IPR001818; Pept_M10A_M12B.
DR   InterPro; IPR006025; Pept_M_Zn_BS.
DR   InterPro; IPR006026; Peptidase_M.
DR   Pfam; PF00040; fn2; 3.
DR   Pfam; PF00045; Hemopexin; 4.
DR   Pfam; PF00413; Peptidase_M10; 1.
DR   Pfam; PF03933; Peptidase_M10_N; 1.
DR   PRINTS; PR00013; FNTYPEII.
DR   PRINTS; PR00138; MATRIXIN.
DR   ProDom; PD000995; FN_Type_II; 3.
DR   SMART; SM00059; FN2; 3.
DR   SMART; SM00120; HX; 4.
DR   SMART; SM00235; ZnMc; 1.
DR   PROSITE; PS00546; CYSTEINE_SWITCH; 1.
DR   PROSITE; PS00023; FN2_1; 3.
DR   PROSITE; PS51092; FN2_2; 3.
DR   PROSITE; PS00024; HEMOPEXIN; 1.
DR   PROSITE; PS00142; ZINC_PROTEASE; 1.
KW   Calcium; Collagen degradation; Direct protein sequencing;
KW   Extracellular matrix; Hydrolase; Metal-binding; Metalloprotease;
KW   Protease; Repeat; Signal; Zinc; Zymogen.
```

```
FT   SIGNAL        1     26
FT   PROPEP       27    106       Activation peptide.
FT   CHAIN       107    663       72 kDa type IV collagenase.
FT   DOMAIN      225    273       Fibronectin type-II 1.
FT   DOMAIN      283    331       Fibronectin type-II 2.
FT   DOMAIN      341    389       Fibronectin type-II 3.
FT   DOMAIN      469    663       Hemopexin-like.
FT   REGION      107    218       Collagenase-like 1.
FT   REGION      219    393       Collagen-binding.
FT   REGION      394    468       Collagenase-like 2.
FT   ACT_SITE    401    401       By similarity.
FT   METAL       131    131       Calcium 1 (By similarity).
FT   METAL       165    165       Calcium 2 (By similarity).
FT   METAL       175    175       Zinc 1 (By similarity).
FT   METAL       177    177       Zinc 1 (By similarity).
FT   METAL       182    182       Calcium 3 (By similarity).
FT   METAL       183    183       Calcium 3 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       190    190       Zinc 1 (By similarity).
FT   METAL       197    197       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       199    199       Calcium 2 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       201    201       Calcium 2 (By similarity).
FT   METAL       203    203       Zinc 1 (By similarity).
FT   METAL       205    205       Calcium 3 (By similarity).
FT   METAL       206    206       Calcium 1 (By similarity).
FT   METAL       208    208       Calcium 3 (By similarity).
FT   METAL       400    400       Zinc 2 (catalytic) (By similarity).
FT   METAL       404    404       Zinc 2 (catalytic) (By similarity).
FT   METAL       410    410       Zinc 2 (catalytic) (By similarity).
FT   METAL       479    479       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       524    524       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       572    572       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   METAL       621    621       Calcium 4 (via carbonyl oxygen) (By
FT                                 similarity).
FT   SITE         99     99       Cysteine switch (Potential).
FT   DISULFID    472    663       By similarity.
FT   CONFLICT     40     40       P -> Q (in Ref. 2).
FT   CONFLICT    116    116       W -> T (in Ref. 2).
FT   CONFLICT    122    122       T -> I (in Ref. 2).
SQ   SEQUENCE   663 AA;  74941 MW;  8D6FDA4E67C3EBCA CRC64;

  Query Match            100.0%;  Score 60;  DB 1;  Length 663;
  Best Local Similarity  100.0%;  Pred. No. 0.045;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


Search completed: February 21, 2006, 18:42:03
Job time : 100.263 secs
```

GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: February 21, 2006, 17:57:40 ; Search time 101.053 Seconds
(without alignments)
43.480 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 60

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : A_Geneseq_21:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	10	6	ABP97135	Abp97135 Human mat
2	60	100.0	10	6	ABG76321	Abg76321 Human mat
3	60	100.0	10	8	ADQ17096	Adq17096 Human mat
4	60	100.0	10	9	ADV68477	Adv68477 Human mat
5	60	100.0	19	6	ABP97133	Abp97133 Human mat
6	60	100.0	19	6	ABG76319	Abg76319 Human mat
7	60	100.0	19	8	ADQ17094	Adq17094 Human mat
8	60	100.0	19	9	ADV68475	Adv68475 Human mat
9	60	100.0	20	2	AAY07368	Aay07368 Matrix me
10	60	100.0	23	2	AAY07359	Aay07359 Matrix me
11	60	100.0	43	6	ABP97137	Abp97137 Human mat
12	60	100.0	43	6	ABG76323	Abg76323 Partial s
13	60	100.0	43	8	ADQ17098	Adq17098 Human mat
14	60	100.0	43	9	ADV68479	Adv68479 Human mat
15	60	100.0	44	6	ABP97124	Abp97124 Human mat
16	60	100.0	44	6	ABG76310	Abg76310 Human mat
17	60	100.0	44	8	ADQ17085	Adq17085 Human mat
18	60	100.0	44	9	ADV68466	Adv68466 Human mat
19	60	100.0	75	4	AAM30829	Aam30829 Peptide #
20	60	100.0	75	4	ABB22666	Abb22666 Protein #
21	60	100.0	75	5	ABG40146	Abg40146 Human pep
22	60	100.0	194	9	AEA20074	Aea20074 Novel hum
23	60	100.0	445	7	ADF59546	Adf59546 Human pol
24	60	100.0	462	9	AEA90447	Aea90447 Human lun
25	60	100.0	468	4	ABG24001	Abg24001 Novel hum
26	60	100.0	623	8	ABM84057	Abm84057 Human dia
27	60	100.0	631	1	AAP96143	Aap96143 Sequence
28	60	100.0	631	1	AAP91139	Aap91139 Human typ
29	60	100.0	631	2	AAR07969	Aar07969 Complete
30	60	100.0	631	2	AAY07350	Aay07350 Human typ
31	60	100.0	631	2	AAW41226	Aaw41226 Human mat
32	60	100.0	631	7	ADM48668	Adm48668 Human mat
33	60	100.0	631	8	ADT05996	Adt05996 Human mat
34	60	100.0	633	8	ADT05997	Adt05997 Mouse mat
35	60	100.0	644	4	AAB20490	Aab20490 Human mat
36	60	100.0	660	2	AAR06420	Aar06420 Type IV c
37	60	100.0	660	4	AAB84607	Aab84607 Amino aci
38	60	100.0	660	4	AAE10431	Aae10431 Human mat
39	60	100.0	660	5	ABB79413	Abb79413 Human mat
40	60	100.0	660	5	ABB90738	Abb90738 Human Tum
41	60	100.0	660	5	AAU84348	Aau84348 Protein M
42	60	100.0	660	6	ABU54445	Abu54445 Human tum
43	60	100.0	660	6	ABP97136	Abp97136 Human mat
44	60	100.0	660	6	AAO16608	Aao16608 Human mat
45	60	100.0	660	6	ABG76322	Abg76322 Human mat
46	60	100.0	660	7	ADD18578	Add18578 Human dis
47	60	100.0	660	7	ADP65244	Adp65244 Human mat
48	60	100.0	660	8	ADN07697	Adn07697 Human mat
49	60	100.0	660	8	ADQ17097	Adq17097 Human mat
50	60	100.0	660	9	ADV90301	Adv90301 Protease-
51	60	100.0	660	9	ADV68478	Adv68478 Human mat
52	60	100.0	662	7	ADE62857	Ade62857 Rat Prote
53	60	100.0	662	7	ADD46270	Add46270 Rat Prote
54	60	100.0	663	2	AAW41111	Aaw41111 Chicken m
55	60	100.0	663	2	AAW41227	Aaw41227 Chicken m
56	60	100.0	663	8	ADT05976	Adt05976 Chicken m
57	60	100.0	663	8	ADT05995	Adt05995 Chicken m
58	60	100.0	708	7	ADF60554	Adf60554 Human con
59	60	100.0	708	9	AEA20970	Aea20970 Novel hum
60	60	100.0	1330	4	ABG23999	Abg23999 Novel hum

ALIGNMENTS

RESULT 1
ABP97135
ID ABP97135 standard; peptide; 10 AA.
XX
AC ABP97135;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:13.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX

PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 45; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 10 AA;

Query Match 100.0%; Score 60; DB 6; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 1 NYNFFPRKPK 10

RESULT 2
ABG76321
ID ABG76321 standard; peptide; 10 AA.
XX
AC ABG76321;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #13.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 44; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 10 AA;

Query Match 100.0%; Score 60; DB 6; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.00098;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 1 NYNFFPRKPK 10

RESULT 3
ADQ17096
ID ADQ17096 standard; peptide; 10 AA.
XX
AC ADQ17096;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #4.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Example 1; SEQ ID NO 13; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 10 AA;

Query Match 100.0%; Score 60; DB 8; Length 10;

```
  Best Local Similarity   100.0%;  Pred. No. 0.00098;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 4
ADV68477
ID   ADV68477 standard; peptide; 10 AA.
XX
AC   ADV68477;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Human matrix metalloproteinase-2 cleavage region polypeptide SeqID13.
XX
KW   cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW   metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW   metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW   metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW   metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW   metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW   metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW   metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS   Homo sapiens.
XX
PN   US2004259802-A1.
XX
PD   23-DEC-2004.
XX
PF   20-JUN-2003; 2003US-00601059.
XX
PR   20-JUN-2003; 2003US-00601059.
XX
PA   (YANG/) YANG S.
PA   (QUIR/) QUIRK S.
XX
PI   Yang S,  Quirk S;
XX
DR   WPI; 2005-047374/05.
XX
PT   A composition for decreasing and inhibiting the growth of chondrosarcoma
PT   cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT   matrix metalloproteinase inhibitor.
XX
PS   Claim 16; SEQ ID NO 13; 50pp; English.
XX
CC   This invention relates to a novel composition for inhibiting growth of
CC   chondrosarcoma cells comprising an amount of a peptide and a
CC   pharmaceutical carrier. The invention may be useful for the production of
CC   compounds with a cytostatic activity acting as metalloprotease 1
CC   inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC   metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC   metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC   metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC   metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC   metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC   metalloprotease inhibitors. The composition is useful for decreasing and
CC   inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC   growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC   treating chondrosarcomas and bone cancers. The present sequence is that
CC   of a peptide derived from a human matrix metalloproteinase which may be
CC   used during the development of a composition of the invention.
XX
SQ   Sequence 10 AA;

  Query Match            100.0%;  Score 60;  DB 9;  Length 10;
  Best Local Similarity  100.0%;  Pred. No. 0.00098;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10
```

```
RESULT 5
ABP97133
ID   ABP97133 standard; peptide; 19 AA.
XX
AC   ABP97133;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:11.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW   macular degeneration; diabetic retinopathy; cleavage region.
XX
OS   Homo sapiens.
XX
PN   WO2003018748-A2.
XX
PD   06-MAR-2003.
XX
PF   15-AUG-2002; 2002WO-US026319.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Weart IF;
XX
DR   WPI; 2003-381408/36.
XX
PT   Anti-angiogenic composition comprising peptide inhibitor of matrix
PT   metalloproteinase, useful for decreasing the expression of vascular
PT   endothelial growth factor and treating cancers and tissue injuries.
XX
PS   Claim 17; Page 45; 103pp; English.
XX
CC   The present invention describes an anti-angiogenic composition (I) for
CC   inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC   comprises an effective amount of a peptide inhibitor of matrix
CC   metalloproteinase (MMP), where the peptide can inhibit the expression of
CC   VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC   antidiabetic, ophthalmological and dermatological activities. (I) can be
CC   used for inhibiting expression of VEGF, and so can be used for inhibiting
CC   growth of tumours and diminishing tumours size. The tumour can be
CC   metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC   (I) is also useful for treating injuries including wounds, surgical
CC   incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC   for treating disorders characterised by excessive angiogenesis e.g.
CC   macular degeneration and diabetic retinopathy. The present sequence
CC   represents a human MMP cleavage region peptide, which is used in the
CC   exemplification of the present invention
XX
SQ   Sequence 19 AA;

  Query Match            100.0%;  Score 60;  DB 6;  Length 19;
  Best Local Similarity  100.0%;  Pred. No. 0.0019;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         10 NYNFFPRKPK 19
```

RESULT 6
ABG76319
ID ABG76319 standard; peptide; 19 AA.
XX
AC ABG76319;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #11.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 44; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 60; DB 6; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 7
ADQ17094
ID ADQ17094 standard; peptide; 19 AA.
XX
AC ADQ17094;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #2.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Claim 11; SEQ ID NO 11; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 60; DB 8; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 8
ADV68475
ID ADV68475 standard; peptide; 19 AA.
XX
AC ADV68475;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 cleavage region polypeptide SeqID11.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.

XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Claim 16; SEQ ID NO 11; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 60; DB 9; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 9
AAY07368
ID AAY07368 standard; peptide; 20 AA.
XX
AC AAY07368;
XX
DT 25-MAR-2003 (revised)
DT 16-JUL-1999 (first entry)
XX
DE Matrix metalloprotease antigenic peptide #5.
XX
KW Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW metastasis; sarcoidosis; antigen.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9010228-A.
XX
PD 07-SEP-1990.
XX
PF 01-MAR-1989; 89US-00317407.
XX
PR 01-MAR-1989; 89US-00317407.
PR 26-FEB-1990; 90US-00488460.
XX
PA (USDC) US SEC OF COMMERCE.
PA (USSH) NAT INST OF HEALTH.
XX
PI Liotta LA, Stetlerste W, Krutzsh H;
XX
DR WPI; 1990-290458/38.
XX
PT Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT tissue damage caused by activated enzyme.
XX
PS Example 3; Page 34; 61pp; English.
XX
CC This sequence represents an antigenic peptide derived from a human type
CC IV matrix metalloprotease (MMP) protein. The invention relates to MMP
CC inhibitor peptides which can be used to treat tissue damage caused by
CC activated MMPs, e.g. for treating inappropriate angiogenesis, arthritis,
CC tumour growth, invasion and metastasis and granulomatous inflammatory
CC conditions such as sarcoidosis. Also antibodies to the peptides can be
CC used to detect the MMPs and can distinguish activated from latent enzyme.
CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to
CC correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ Sequence 20 AA;

Query Match 100.0%; Score 60; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.002;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 6 NYNFFPRKPK 15

RESULT 10
AAY07359
ID AAY07359 standard; peptide; 23 AA.
XX
AC AAY07359;
XX
DT 25-MAR-2003 (revised)
DT 16-JUL-1999 (first entry)
XX
DE Matrix metalloprotease inhibitor peptide #23.
XX
KW Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW metastasis; sarcoidosis.
XX
OS Synthetic.
XX
PN WO9010228-A.
XX
PD 07-SEP-1990.
XX
PF 01-MAR-1989; 89US-00317407.
XX
PR 01-MAR-1989; 89US-00317407.
PR 26-FEB-1990; 90US-00488460.
XX
PA (USDC) US SEC OF COMMERCE.
PA (USSH) NAT INST OF HEALTH.
XX
PI Liotta LA, Stetlerste W, Krutzsh H;
XX
DR WPI; 1990-290458/38.
XX
PT Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT tissue damage caused by activated enzyme.
XX
PS Example 1; Page 15; 61pp; English.
XX
CC This peptide represents a matrix metalloprotease (MMP) inhibitor peptide
CC of the invention. The peptides can be used to treat tissue damage caused
CC by activated MMPs, e.g. for treating inappropriate angiogenesis,
CC arthritis, tumour growth, invasion and metastasis and granulomatous
CC inflammatory conditions such as sarcoidosis. Antibodies to the peptides
CC can be used to detect the MMPs and can distinguish activated from latent

```
CC   enzyme. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC   2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 23 AA;

  Query Match            100.0%;  Score 60;  DB 2;  Length 23;
  Best Local Similarity   100.0%;  Pred. No. 0.0023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         14 NYNFFPRKPK 23


RESULT 11
ABP97137
ID   ABP97137 standard; peptide; 43 AA.
XX
AC   ABP97137;
XX
DT   24-JUN-2003  (first entry)
XX
DE   Human matrix metalloproteinase 2 peptide SEQ ID NO:15.
XX
KW   Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW   matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW   vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW   vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW   dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW   non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW   macular degeneration; diabetic retinopathy; cleavage region.
XX
OS   Homo sapiens.
XX
PN   WO2003018748-A2.
XX
PD   06-MAR-2003.
XX
PF   15-AUG-2002; 2002WO-US026319.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Weart IF;
XX
DR   WPI; 2003-381408/36.
XX
PT   Anti-angiogenic composition comprising peptide inhibitor of matrix
PT   metalloproteinase, useful for decreasing the expression of vascular
PT   endothelial growth factor and treating cancers and tissue injuries.
XX
PS   Disclosure; Page 26; 103pp; English.
XX
CC   The present invention describes an anti-angiogenic composition (I) for
CC   inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC   comprises an effective amount of a peptide inhibitor of matrix
CC   metalloproteinase (MMP), where the peptide can inhibit the expression of
CC   VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC   antidiabetic, ophthalmological and dermatological activities. (I) can be
CC   used for inhibiting expression of VEGF, and so can be used for inhibiting
CC   growth of tumours and diminishing tumours size. The tumour can be
CC   metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC   (I) is also useful for treating injuries including wounds, surgical
CC   incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC   for treating disorders characterised by excessive angiogenesis e.g.
CC   macular degeneration and diabetic retinopathy. The present sequence
CC   represents a human MMP peptide, which is used in the exemplification of
CC   the present invention
XX
SQ   Sequence 43 AA;

  Query Match            100.0%;  Score 60;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.0043;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 12
ABG76323
ID   ABG76323 standard; protein; 43 AA.
XX
AC   ABG76323;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Partial sequence from human matrix metalloproteinase-2 (MMP-2).
XX
KW   Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW   cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW   keratinocyte; healthy skin development; wound healing; scarring;
KW   skin tone; wrinkle; anti-aging; vulnerary.
XX
OS   Homo sapiens.
XX
PN   WO2003016520-A1.
XX
PD   27-FEB-2003.
XX
PF   15-AUG-2002; 2002WO-US026198.
XX
PR   16-AUG-2001; 2001US-0312726P.
PR   21-DEC-2001; 2001US-00032376.
PR   21-MAY-2002; 2002US-00153185.
XX
PA   (KIMB ) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI   Quirk S,  Malik S,  Villanueva JM;
XX
DR   WPI; 2003-289980/28.
XX
PT   Novel peptide inhibitor of proteinase activity of matrix
PT   metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT   stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS   Claim 1; Page 27; 120pp; English.
XX
CC   The present invention relates to peptide inhibitors of metalloproteinases
CC   (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC   peptide sequences related to the cleavage regions of the proenzyme forms
CC   of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC   proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC   development, treating wounds, preventing scarring, improving skin tone,
CC   reducing wrinkling and for simulating the development of smooth, healthy
CC   skin. The peptide inhibitors are useful as anti-aging and wound healing
CC   compounds. The present sequence represents a partial sequence of human
CC   MMP-2
XX
SQ   Sequence 43 AA;

  Query Match            100.0%;  Score 60;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.0043;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 13
ADQ17098
```

ID ADQ17098 standard; peptide; 43 AA.
XX
AC ADQ17098;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) wound site peptide.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Disclosure; SEQ ID NO 15; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to
CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) wound site peptide. This sequence is used in the
CC exemplification of the invention.
XX
SQ Sequence 43 AA;

Query Match 100.0%; Score 60; DB 8; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.0043;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 14
ADV68479
ID ADV68479 standard; protein; 43 AA.
XX
AC ADV68479;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 polypeptide SeqID15.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Disclosure; SEQ ID NO 15; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 43 AA;

Query Match 100.0%; Score 60; DB 9; Length 43;
Best Local Similarity 100.0%; Pred. No. 0.0043;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 15
ABP97124
ID ABP97124 standard; peptide; 44 AA.
XX
AC ABP97124;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 cleavage region peptide SEQ ID NO:2.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.

XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Claim 17; Page 15; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents a human MMP cleavage region peptide, which is used in the
CC exemplification of the present invention
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 60; DB 6; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.0044;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 16
ABG76310
ID ABG76310 standard; protein; 44 AA.
XX
AC ABG76310;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase (MMP) peptide inhibitor #2.
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Claim 1; Page 16; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. ABG76309-ABG76321 represent peptide inhibitors of MMPs
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 60; DB 6; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.0044;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 17
ADQ17085
ID ADQ17085 standard; peptide; 44 AA.
XX
AC ADQ17085;
XX
DT 23-SEP-2004 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP2) cleavage region peptide #1.
XX
KW Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW human; matrix metalloproteinase; MMP.
XX
OS Homo sapiens.
XX
PN US2004127421-A1.
XX
PD 01-JUL-2004.
XX
PF 30-DEC-2002; 2002US-00335207.
XX
PR 30-DEC-2002; 2002US-00335207.
XX
PA (MALI/) MALIK S.
PA (QUIR/) QUIRK S.
XX
PI Malik S, Quirk S;
XX
DR WPI; 2004-506456/48.
XX
PT Composition used for preventing and treating wrinkles and treating wounds
PT comprises peptide having sequence related to matrix metalloproteinase
PT proenzyme.
XX
PS Example 1; SEQ ID NO 2; 60pp; English.
XX
CC The present invention provides peptides and compositions containing such
CC peptides that are useful as agents to maintain healthy skin and to

CC promote the condition of the skin. The invention is useful for increasing
CC the amount of fibronectin in tissue. The invention is also useful for
CC encouraging the maintenance and development of healthy skin, preventing
CC and treating wrinkles and for treating wounds. The invention acts as
CC vulnerary and dermatological agents. The present sequence is human matrix
CC metalloproteinase (MMP) cleavage region peptide. This sequence is used in
CC the exemplification of the invention.
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 60; DB 8; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.0044;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 18
ADV68466
ID ADV68466 standard; protein; 44 AA.
XX
AC ADV68466;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 cleavage region polypeptide SeqID2.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Claim 16; SEQ ID NO 2; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a peptide derived from a human matrix metalloproteinase which may be
CC used during the development of a composition of the invention.
XX
SQ Sequence 44 AA;

Query Match 100.0%; Score 60; DB 9; Length 44;
Best Local Similarity 100.0%; Pred. No. 0.0044;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 33 NYNFFPRKPK 42

RESULT 19
AAM30829
ID AAM30829 standard; protein; 75 AA.
XX
AC AAM30829;
XX
DT 17-OCT-2001 (first entry)
XX
DE Peptide #4866 encoded by probe for measuring placental gene expression.
XX
KW Probe; microarray; human; placenta; antenatal diagnosis;
KW genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200157272-A2.
XX
PD 09-AUG-2001.
XX
PF 30-JAN-2001; 2001WO-US000663.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2001-488897/53.
XX
PT Human genome-derived single exon nucleic acid probes useful for analyzing
PT gene expression in human placenta.
XX
PS Claim 27; SEQ ID NO 31098; 654pp; English.
XX
CC The present invention relates to single exon nucleic acid probes (SENP:
CC see AAI31315-AAI57546). The present sequence is a peptide encoded by one
CC such probe. The probes are useful for producing a microarray for
CC predicting, measuring and displaying gene expression in samples derived
CC from human placenta. The probes are useful for antenatal diagnosis of
CC human genetic disorders
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 60; DB 4; Length 75;
Best Local Similarity 100.0%; Pred. No. 0.0075;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 58 NYNFFPRKPK 67

RESULT 20
ABB22666
ID ABB22666 standard; protein; 75 AA.
XX
AC ABB22666;
XX
DT 23-JAN-2002 (first entry)
XX
DE Protein #4665 encoded by probe for measuring heart cell gene expression.
XX
KW Human; gene expression; heart; microarray; vascular system;
KW cardiovascular disease; hypertension; cardiac arrhythmia;
KW congenital heart disease.
XX
OS Homo sapiens.
XX
PN WO200157274-A2.
XX
PD 09-AUG-2001.
XX
PF 30-JAN-2001; 2001WO-US000666.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2001-488899/53.
XX
PT Single exon nucleic acid probes for analyzing gene expression in human
PT hearts.
XX
PS Claim 15; SEQ ID NO 24436; 530pp; English.
XX
CC The present invention relates to single exon nucleic acid probes for
CC measuring human gene expression in a sample derived from human heart (see
CC ABA21535-ABA41305). The present sequence is a protein encoded by one such
CC probe. The probes may be used for predicting, measuring and displaying
CC gene expression in samples derived from the human heart via microarrays.
CC By measuring gene expression, the probes are useful for predicting,
CC diagnosing, grading, staging, monitoring and prognosing diseases of the
CC human heart and vascular system e.g. cardiovascular disease,
CC hypertension, cardiac arrhythmias and congenital heart disease. Note: The
CC sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 60; DB 4; Length 75;
Best Local Similarity 100.0%; Pred. No. 0.0075;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 58 NYNFFPRKPK 67

RESULT 21
ABG40146
ID ABG40146 standard; peptide; 75 AA.
XX
AC ABG40146;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human peptide encoded by genome-derived single exon probe SEQ ID 29811.
XX
KW Human; single exon probe; asthma; lung cancer; COPD; ILD;
KW chronic obstructive pulmonary disease; interstitial lung disease;
KW familial idiopathic pulmonary fibrosis; neurofibromatosis;
KW tuberous sclerosis; Gaucher's disease; Niemann-Pick disease;
KW Hermansky-Pudlak syndrome; sarcoidosis; pulmonary haemosiderosis;
KW pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome;
KW pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia;
KW primary ciliary dyskinesis; pulmonary hypertension;
KW hyaline membrane disease.
XX
OS Homo sapiens.
XX
PN WO200186003-A2.
XX
PD 15-NOV-2001.
XX
PF 30-JAN-2001; 2001WO-US000665.
XX
PR 04-FEB-2000; 2000US-0180312P.
PR 26-MAY-2000; 2000US-0207456P.
PR 30-JUN-2000; 2000US-00608408.
PR 03-AUG-2000; 2000US-00632366.
PR 21-SEP-2000; 2000US-0234687P.
PR 27-SEP-2000; 2000US-0236359P.
PR 04-OCT-2000; 2000GB-00024263.
XX
PA (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI Penn SG, Hanzel DK, Chen W, Rank DR;
XX
DR WPI; 2002-114183/15.
XX
PT Spatially-addressable set of single exon nucleic acid probes, used to
PT measure gene expression in human lung samples.
XX
PS Claim 27; SEQ ID NO 29811; 634pp; English.
XX
CC The invention relates to a spatially-addressable set of single exon
CC nucleic acid probes for measuring gene expression in a sample derived
CC from human lung comprising single exon nucleic acid probes having one of
CC 12614 nucleic acid sequences mentioned in the specification, or their
CC complements or the 12387 open reading frames derived from the 12614
CC probes. Also included are a microarray comprising the novel set of probes
CC ; the novel set of probes which hybridise at high stringency to a nucleic
CC acid expressed in the human lung; measuring gene expression in a sample
CC derived from human lung, comprising (a) contacting the array with a
CC collection of detectably labeled nucleic acids derived from human lung
CC mRNA, and (b) measuring the label detectably bound to each probe of the
CC array; identifying exons in a eukaryotic genome, comprising (a)
CC algorithmically predicting at least one exon from genomic sequences of
CC the eukaryote; and (b) detecting specific hybridisation of detectably
CC labeled nucleic acids from eukaryote lung mRNA, to a single exon probe,
CC having a fragment identical to the predicted exon, the probe is included
CC in the above mentioned microarray; assigning exons to a single gene,
CC comprising (a) identifying exons from genomic sequence by the method
CC above and (b) measuring the expression of each of the exons in several
CC tissues and/or cell types using hybridisation to a single exon
CC microarrays having a probe with the exon, where a common pattern of
CC expression of the exons in the tissues and/or cell types indicates that
CC the exons should be assigned to a single gene; a peptide comprising one
CC of 12011 sequences, mentioned in the specification, or encoded by the
CC probes/open reading frames (ORF). The probes are used for gene expression
CC analysis, and for identifying exons in a gene, particularly using human
CC lung derived mRNA and for the study of lung diseases such as asthma, lung
CC cancer, chronic obstructive pulmonary disease (COPD), interstitial lung
CC disease (ILD), familial idiopathic pulmonary fibrosis, neurofibromatosis,
CC tuberous sclerosis, Gaucher's disease, Niemann-Pick disease, Hermansky-
CC Pudlak syndrome, sarcoidosis, pulmonary haemosiderosis, pulmonary
CC histiocytosis, lymphangioleiomyomtosis, pulmonary alveolar proteinosis,
CC Karagener syndrome, fibrocystic pulmonary dysplasia, primary ciliary

CC dyskinesis, pulmonary hypertension and hyaline membrane disease. The
CC present sequence is a peptide/protein encoded by a single exon probe of
CC the invention. Note: The sequence data for this patent did not form part
CC of the printed specification, but was obtained in electronic format
CC directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 75 AA;

Query Match 100.0%; Score 60; DB 5; Length 75;
Best Local Similarity 100.0%; Pred. No. 0.0075;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 58 NYNFFPRKPK 67

RESULT 22
AEA20074
ID AEA20074 standard; protein; 194 AA.
XX
AC AEA20074;
XX
DT 11-AUG-2005 (first entry)
XX
DE Novel human polypeptide SEQ ID NO 768.
XX
KW vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW DNA purification; protein purification; osteoarthritis; antiarthritic;
KW osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;
KW periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW cerebrovascular ischemia; cerebroprotective; vasotropic;
KW cardiovascular disease; autoimmune disease; immunosuppressive;
KW immune disorder; viral infection; virucide; infection; cancer;
KW cytostatic; neoplasm.
XX
OS Homo sapiens.
XX
PN WO2005049806-A2.
XX
PD 02-JUN-2005.
XX
PF 11-MAR-2004; 2004WO-US007412.
XX
PR 14-MAR-2003; 2003US-00389559.
XX
PA (NUVE-) NUVELO INC.
XX
PI Tang TY, Wang J, Wang ZW, Zhang J, Ren F, Zhou P, Ma Y;
PI Ghosh M, Xue A, Asundi V, Zhao Q, Wang D, Goodrich R, Chen R;
PI Wehrman T, Weng G, Boyle B;
XX
DR WPI; 2005-417730/42.
DR N-PSDB; AEA19507.
XX
PT New polynucleotide encoding a polypeptide with biological activity,
PT useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT CNS and peripheral disease, stroke, autoimmune disorders, viral
PT infection, or cancer.
XX
PS Claim 20; SEQ ID NO 768; 500pp; English.
XX
CC The invention describes a new isolated polynucleotide (I) encoding a
CC polypeptide with biological activity comprising: a nucleotide sequence of
CC SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC to the sequence of (i) under stringent hybridization conditions; or a
CC nucleotide sequence having greater than 99% sequence identity with the
CC sequence of (i). Also described are: a(n) (expression)vector comprising
CC (I); a host cell genetically engineered to comprise (I) operatively,
CC associated with a regulatory sequence that modulates expression of the
CC polynucleotide in the host cell; an isolated polypeptide comprising a
CC sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC polynucleotide hybridizing under stringent conditions with any one of SEQ
CC ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC carrier; an antibody directed against the polypeptide of (3); a method
CC for detecting (I) in a sample; a method for detecting the polypeptide of
CC (3) in a sample; a method for identifying a compound that binds to the
CC polypeptide of (3); a method of producing the polypeptide of (3); and a
CC collection of polynucleotides, where the collection comprising of at
CC least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC 568-1134. All sequences are fully defined in the specification. The
CC sequences and methods are useful in diagnostics, forensic, and gene
CC mapping, in identifying of mutations responsible for genetic disorders or
CC other traits, in assessing biodiversity, and for producing many other
CC types of data and products dependent on DNA and amino acid sequences. The
CC composition and method are useful for treating a disease or disorder,
CC e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC autoimmune disorders, viral infection, or cancer. This is the amino acid
CC sequence of a novel polypeptide of the invention.
XX
SQ Sequence 194 AA;

Query Match 100.0%; Score 60; DB 9; Length 194;
Best Local Similarity 100.0%; Pred. No. 0.02;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 74 NYNFFPRKPK 83

RESULT 23
ADF59546
ID ADF59546 standard; protein; 445 AA.
XX
AC ADF59546;
XX
DT 12-FEB-2004 (first entry)
XX
DE Human polypeptide sequence SEQ ID NO:1954.
XX
KW biological activity; genetic engineering; hybridisation probe; oligomer;
KW primer; chromosome mapping; gene mapping; recombinant protein production;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003080795-A2.
XX
PD 02-OCT-2003.
XX
PF 09-AUG-2002; 2002WO-US025485.
XX
PR 09-AUG-2001; 2001US-0311261P.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Yang Y, Wang Z, Weng G, Ma Y;
XX
DR WPI; 2003-876918/81.
DR N-PSDB; ADF58546.
XX
PT New polynucleotides, useful as hybridization probes, oligomers or
PT primers, for chromosome or gene mapping, for the recombinant production
PT of proteins, and for generating antisense DNA or RNA.
XX
PS Claim 20; SEQ ID NO 1954; 571pp; English.
XX
CC The present sequence represents a polypeptide (II) with biological
CC activity, which is encoded by an isolated polynucleotide sequence (I)

CC from the present invention . Also described: (1) a vector comprising (I);
CC (2) an expression vector comprising (I); (3) a host cell genetically
CC engineered to comprise (I) which is operatively associated with a
CC regulatory sequence that modulates expression of (I) in the host cell;
CC (4) a polypeptide (II) encoded by (I); (5) a composition comprising the
CC polypeptide of (4) and a carrier; (6) an antibody directed against the
CC polypeptide of (4); (7) detecting (I) or the polypeptide of (4) in a
CC sample; (8) identifying a compound that binds to the polypeptide of (4);
CC (9) producing the polypeptide of (4); and (10) a collection of
CC polynucleotides comprising at least one of the polynucleotide sequences
CC (I). The polynucleotides (I) can be used as hybridisation probes,
CC oligomers or primers, for chromosome or gene mapping, for the recombinant
CC production of proteins, and for generating antisense DNA or RNA.
XX
SQ Sequence 445 AA;

Query Match 100.0%; Score 60; DB 7; Length 445;
Best Local Similarity 100.0%; Pred. No. 0.046;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 24
AEA90447
ID AEA90447 standard; protein; 462 AA.
XX
AC AEA90447;
XX
DT 08-SEP-2005 (first entry)
XX
DE Human lung specifc protein, DEX0486_001.aa.1.
XX
KW DNA hybridization; diagnosis; diagnostic; lung tumor; vaccine;
KW cytostatic; gene therapy; drug screening.
XX
OS Homo sapiens.
XX
PN US2005142572-A1.
XX
PD 30-JUN-2005.
XX
PF 24-MAY-2004; 2004US-00852707.
XX
PR 22-MAY-2003; 2003US-0473941P.
XX
PA (MACI/) MACINA R A.
PA (TURN/) TURNER L R.
PA (SUNY/) SUN Y.
XX
PI Macina RA, Turner LR, Sun Y;
XX
DR WPI; 2005-457785/46.
XX
PT New nucleic acid molecule from Homo sapiens, useful for identifying,
PT diagnosing, monitoring, staging, imaging and treating a patient with lung
PT cancer and non-cancerous diseases.
XX
PS Claim 12; SEQ ID NO 56; 247pp; English.
XX
CC The present invention relates to human nucleic acid molecules that are
CC specific to lung cells, lung tissue and/or the lung organ. These lung
CC specific nucleic acids may be naturally occurring cDNA, genomic DNA, RNA
CC or a fragment, or a non-naturally occurring nucleic acid. Due to
CC alternative splicing and transcriptional modification one lung-specific
CC gene may encode for multiple lung specific RNA's. Specifically claimed is
CC new isolated nucleic acid molecule encoding a protein sequence selected
CC from 83 (SEQ ID NO: 56-138) sequences; and a nucleic acid selected from
CC 56(SEQ ID NO: 1-55) sequences. Described is a method of determining the
CC presence of a lung specific nucleic acid or protein in a sample; and a
CC method of diagnosing or monitoring the presence and metastases of lung
CC cancer in a patient. Claimed is a vaccine comprising the polypeptide or
CC the nucleic acid encoding the polypeptide. Determining the presence of a
CC lung specific nucleic acid in a sample comprises contacting the sample
CC with a nucleic acid molecule above which will hybridize to a lung
CC specific nucleic acid. A composition consisting of the nucleic acid
CC molecule or the polypeptide is useful for treating a patient with lung
CC cancer, where the administration induces an immune response against the
CC lung cancer cell expressing the nucleic acid molecule or polypeptide. The
CC nucleic acid molecule and polypeptide are also useful for identifying,
CC diagnosing, monitoring, staging, imaging and treating non-cancerous
CC disease states in lung, identifying lung tissue, monitoring and
CC identifying and/or designing (ant)agonists of the polypeptide, and for
CC gene therapy. The present sequence is a human lung specifc protein.
XX
SQ Sequence 462 AA;

Query Match 100.0%; Score 60; DB 9; Length 462;
Best Local Similarity 100.0%; Pred. No. 0.048;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 25
ABG24001
ID ABG24001 standard; protein; 468 AA.
XX
AC ABG24001;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #23992.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US008631.
XX
PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR N-PSDB; AAS88188.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
PS Claim 20; SEQ ID NO 54360; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging

```
CC   of sites expressing (II). (I) and (II) are useful for treating disorders
CC   involving aberrant protein expression or biological activity. The
CC   polypeptide and polynucleotide sequences have applications in
CC   diagnostics, forensics, gene mapping, identification of mutations
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC   amino acid sequences of the invention. Note: The sequence data for this
CC   patent did not appear in the printed specification, but was obtained in
CC   electronic format directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 468 AA;

  Query Match             100.0%;  Score 60;  DB 4;  Length 468;
  Best Local Similarity   100.0%;  Pred. No. 0.048;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         95 NYNFFPRKPK 104


RESULT 26
ABM84057
ID   ABM84057 standard; protein; 623 AA.
XX
AC   ABM84057;
XX
DT   18-NOV-2004  (first entry)
XX
DE   Human diagnostic and therapeutic pprotein SEQ ID NO:4306.
XX
KW   gene therapy; human diagnostic and therapeutic polynucleotide; dithp.
XX
OS   Homo sapiens.
XX
PN   WO2004023973-A2.
XX
PD   25-MAR-2004.
XX
PF   12-SEP-2003; 2003WO-US028227.
XX
PR   12-SEP-2002; 2002US-0410259P.
PR   12-SEP-2002; 2002US-0410260P.
XX
PA   (INCY-) INCYTE CORP.
XX
PI   Schmidt JP,  Wright RJ,  Bruns CM,  Marjanovic MM,  Shen F;
PI   Harthshorne TA,  Suchorolski MT,  Altus CM,  Pitts SJ,  Elder LV;
PI   Mooney EM,  Delegeane AM,  Panesar IS,  Banville SC,  Reddy TP;
PI   Stevens KA,  Blanchard JL,  Panzer SR,  Wang X,  Au AP,  Gerstin EH;
PI   Peralta CH,  Anderson SB,  Rioux P,  Shen EJ,  Wu MC,  Stuve LL;
PI   Lagace RE,  Spiro PA,  Stewart EA,  Wingrove J,  Vitt UA,  Kirton ES;
PI   Xu Y,  Kwong M,  Policky JL,  Hurwitz BL,  Ma Y,  Jackson JL,  Gietzen D;
PI   Patury S,  Shi X,  Suarez CJ;
XX
DR   WPI; 2004-329368/30.
DR   N-PSDB; ACN42709.
XX
PT   New diagnostic and therapeutic polynucleotides and polypeptides, useful
PT   in diagnosing a condition, disease or disorder associated with human
PT   molecules, e.g. autoimmune or inflammatory disorders, in gene therapy or
PT   in gene mapping.
XX
PS   Claim 27; Page; 190pp; English.
XX
CC   The invention relates to novel diagnostic and therapeutic polynucleotides
CC   selected from one of the 2722 sequences defined in the specification. A
CC   polynucleotide of the invention may have a use in gene therapy. The human
CC   diagnostic and therapeutic polynucleotides (dithp) or polypeptides may be
CC   used to diagnose a particular condition, disease or disorder associated
CC   with human molecules, e.g. cell proliferative disorders,
CC   autoimmune/inflammatory disorder, developmental disorder, endocrine
CC   disorder, neurological disorders, gastrointestinal disorders, or
CC   infections caused by virus, bacteria, fungi or parasite. The dithp
CC   molecules may also be used in genetic mapping, in identifying individuals
CC   from minute biological samples, in detecting single nucleotide
CC   polymorphisms, as molecular weight markers, and for somatic or germline
CC   gene therapy. The present sequence represents a dithp protein of the
CC   invention. Note: The sequence data for this patent is not represented in
CC   the printed specification, but was obtained in electronic format directly
CC   from WIPO at www.wipo.int/pct/en/sequences/listing.htm
XX
SQ   Sequence 623 AA;

  Query Match             100.0%;  Score 60;  DB 8;  Length 623;
  Best Local Similarity   100.0%;  Pred. No. 0.064;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 27
AAP96143
ID   AAP96143 standard; protein; 631 AA.
XX
AC   AAP96143;
XX
DT   25-MAR-2003  (revised)
DT   09-MAY-1991  (first entry)
XX
DE   Sequence of human type IV collagenase (gelatinase) in pGEL 186.2.
XX
KW   Hypertrophic scar; keloid; intervertebral disc disease; enzyme.
XX
OS   Homo sapiens.
XX
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
DR   N-PSDB; AAN91700.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Disclosure; Fig 3; 36pp; English.
XX
CC   The original source of the protein material was H-ras transformed human
CC   bronchial epithelial cells (TBE-1). The AA sequence was then used to
CC   develop oligonucleotide probes which were used to screen a cDNA library
CC   of human skin fibroblast mRNA. The longest clone, pGEL 186.2, represented
CC   almost the full gelatinase mRNA sequence except the leader sequence
CC   encoding the first few AA's of the signal peptide. (Updated on 25-MAR-
CC   2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
```

```
                  ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 28
AAP91139
ID   AAP91139 standard; protein; 631 AA.
XX
AC   AAP91139;
XX
DT   25-MAR-2003  (revised)
DT   18-DEC-1989  (first entry)
XX
DE   Human type IV collagenase (gelatinase).
XX
KW   Human type IV collagenase; gelatinase; hypertrophic scars; keloids;
KW   intervertebral disc disease; extracellular matrix metalloprotease;
KW   bronchial epithelial cells; TBE-1 cells; pGel186.2; type II motif;
KW   fibonectin; collagen-binding domain.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1. .192
FT   Domain          193. .367
FT   Duplication     197. .254
FT   Duplication     255. .312
FT   Duplication     313. .368
FT   Domain          368. .631
XX
PN   GB2209526-A.
XX
PD   17-MAY-1989.
XX
PF   02-SEP-1988;   88GB-00820803.
XX
PR   04-SEP-1987;   87US-00093421.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Eisen AZ,  Goldberg GI;
XX
DR   WPI; 1989-147011/20.
XX
PT   DNA encoding human type IV collagenase (gelatinase) - for use in the
PT   treatment of hypertrophic scars, keloids and intervertebral disc disease.
XX
PS   Claim 2; Fig 6; 36pp; English.
XX
CC   Human type IV collagenase (gelatinase). Protein source was H-ras
CC   transformed human bronchial epithelial cells (TBE-1). The sequence was
CC   determined from clone pGel 186.2 which represents almost the full mRNA
CC   sequence. Feature 1 is the N-terminal domain, I; feature 2 is a middle
CC   domain, II, which is organised into 3 x 58 amino acid long head to tail
CC   repeats (features 4,5,and 6). These show homology to the type II motif
CC   collagen binding domain of fibronectin. Feature 3 is the C-terminal
CC   domain. The enzyme could be used in the treatment of hypertrophic scars,
CC   keloids, and intervertebral disc disease. See also AAN91700. (Updated on
CC   25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PA
CC   field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 1;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 29
AAR07969
ID   AAR07969 standard; protein; 631 AA.
XX
AC   AAR07969;
XX
DT   25-MAR-2003  (revised)
DT   17-DEC-2001  (revised)
DT   16-JAN-1991  (first entry)
XX
DE   Complete type IV collagenase.
XX
KW   Type IV collagenase; peptide fragments; metalloproteinase detection;
KW   antibodies; metalloptroteinase inhibition; angiogenesis; arthritis;
KW   tumour growth; metastasis; granulomatous inflammatory conditions;
KW   sarciodosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .18
FT                   /label= 1
FT   Peptide         19. .33
FT                   /label= 2
FT   Peptide         26. .42
FT                   /label= 3
FT   Protein         34. .50
FT                   /label= 4
FT   Peptide         51. .66
FT                   /label= 5
FT   Peptide         67. .89
FT                   /label= 7
FT   Peptide         67. .80
FT                   /label= 6
FT   Peptide         69. .75
FT                   /label= 8
FT   Peptide         75. .94
FT                   /label= 9
FT   Peptide         141. .150
FT                   /label= 10
FT   Peptide         299. .307
FT                   /label= 11
FT   Peptide         308. .318
FT                   /label= 12
FT   Peptide         344. .368
FT                   /label= 13
FT   Peptide         371. .386
FT                   /label= 14
FT   Peptide         372. .375
FT                   /label= 15
FT   Peptide         472. .491
FT                   /label= 16
XX
PN   USN7317407-N.
XX
PD   21-AUG-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
XX
PA   (USSH ) US NAT CANCER INST.
PA   (USDC ) US SEC OF COMMERCE.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsch H;
XX
DR   WPI; 1990-290093/38.
XX
PT   New type-IV collagenase peptide fragments - used for metallo-proteinase
PT   detection and inhibition and for producing antibodies for enzyme
PT   detection.
XX
PS   Disclosure; Fig 1; -pp; English.
XX
```

```
CC   Type IV procollagenase was purified from human A2058 melanoma cells. The
CC   complete amino acid sequence was determined (see also Hoyhtya, M. et al,
CC   (1988) FEBS Letters 233, 109-113). Based on this sequence, peptides were
CC   synthesised (see features) having homology with a histidine contg. domain
CC   at residues 371-386, a cysteine contg. domain at residues 200-370, the 80
CC   residue amino terminus or a region 159 residues from the carboxy
CC   terminus. These regions correspond to the domain of the enzyme involved
CC   in enzyme activation and interaction of the enzyme with the substrate.
CC   The peptides are useful in metalloproteinase detection and inhibition.
CC   They can be used in the treatment of inappropriate angiogenesis,
CC   arthritis, tumour growth, invasion and metastasis and granulomatous
CC   inflammatory conditions such as sarciodisis. The peptides can be used to
CC   produce antibodies. Peptide 6, at concn. of 0.1 mM inhibited 80% of the
CC   enzyme activity. See also US7494796-A and WO9010228. (Note: Revised entry
CC   submitted to correct the patent number format of US Government-owned NTIS
CC   applications to prevent clashes with ongoing US granted patent numbers.
CC   For further information please visit the Derwent web site at
CC   www.derwent.com/dwpi/updates/ntis_us.html.) (Updated on 25-MAR-2003 to
CC   correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 30
AAY07350
ID   AAY07350 standard; protein; 631 AA.
XX
AC   AAY07350;
XX
DT   25-MAR-2003  (revised)
DT   16-JUL-1999  (first entry)
XX
DE   Human type IV matrix metalloprotease protein.
XX
KW   Matrix metalloprotease; inhibitor; tissue damage; angiogenesis; antibody;
KW   arthritis; tumour growth; granulomatous inflammatory condition; enzyme;
KW   metastasis; sarcoidosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 452
FT                   /note= "designated in specification as U"
XX
PN   WO9010228-A.
XX
PD   07-SEP-1990.
XX
PF   01-MAR-1989;   89US-00317407.
XX
PR   01-MAR-1989;   89US-00317407.
PR   26-FEB-1990;   90US-00488460.
XX
PA   (USDC ) US SEC OF COMMERCE.
PA   (USSH ) NAT INST OF HEALTH.
XX
PI   Liotta LA,  Stetlerste W,  Krutzsh H;
XX
DR   WPI; 1990-290458/38.
XX
PT   Matrix metallo:proteinase peptide(s) - used to inhibit enzyme in treating
PT   tissue damage caused by activated enzyme.
XX
PS   Disclosure; Fig 1; 61pp; English.
XX
CC   This sequence represents a human type IV matrix metalloprotease (MMP)
CC   zymogen (precursor protein). The invention relates to MMP inhibitor
CC   peptides which can be used to treat tissue damage caused by activated
CC   MMPs, e.g. for treating inappropriate angiogenesis, arthritis, tumour
CC   growth, invasion and metastasis and granulomatous inflammatory conditions
CC   such as sarcoidosis. Antibodies to the peptides can be used to detect the
CC   MMPs and can distinguish activated from latent enzyme. (Updated on 25-MAR
CC   -2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 31
AAW41226
ID   AAW41226 standard; protein; 631 AA.
XX
AC   AAW41226;
XX
DT   09-JUN-1998  (first entry)
XX
DE   Human mature matrix metalloprotease-2 (MMP-2) protein sequence.
XX
KW   Matrix metalloprotease-2; MMP-2; alpha-v-beta-5 antagonist; treatment;
KW   vitronectin receptor; inhibition; angiogenesis; integrin; tumour growth;
KW   restenosis; neovascularisation.
XX
OS   Homo sapiens.
XX
PN   WO9745447-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009099.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA,  Friedlander M;
XX
DR   WPI; 1998-041758/04.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta5
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Fig 16; 117pp; English.
XX
CC   The present sequence represents the mature protein of human matrix
CC   metalloprotease-2 (MMP-2). Fragments of this protein (AAW41228-33) are
CC   able to act as alpha-v-beta-5 antagonists. Alpha-v-beta-5 is a
CC   vitronectin receptor. Inhibitors of alpha-v-beta-5 can inhibit
CC   angiogenesis. The specification describes a novel labelled package that
CC   contains an inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising
CC   polypeptide that binds to integrin alpha-v-beta-5 and includes a part of
CC   the C-terminal domain of MMP. The antagonists are used to inhibit
CC   angiogenesis in inflamed tissue, in solid tumours or metastases, and in a
CC   wide range of ocular disorders (e.g. diabetic or other forms of
CC   retinopathy, neovascular glaucoma, or corneal transplants). They are
CC   particularly used to induce regression or to inhibit growth of tumours.
CC   The alpha-v-beta-5 antagonists can also be used to treat restenosis
CC   caused by migration of smooth muscle cells following angioplasty and to
CC   reduce blood supply to selected tissues. The antagonists particularly
```

```
CC   inhibit neovascularisation where this is induced by cytokines, e.g.
CC   transforming growth factor alpha, epidermal growth factor or especially
CC   vascular endothelial growth factor
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 32
ADM48668
ID   ADM48668 standard; protein; 631 AA.
XX
AC   ADM48668;
XX
DT   03-JUN-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP-2) protein.
XX
KW   Cancer; metastasis; matrix metalloproteinase-2; MMP-2; vaccine;
KW   immune response; gene therapy; cytostatic; enzyme; human.
XX
OS   Homo sapiens.
XX
PN   US2003139345-A1.
XX
PD   24-JUL-2003.
XX
PF   23-JAN-2003; 2003US-00350258.
XX
PR   23-JAN-2002; 2002US-0351317P.
XX
PA   (NETK/) NETKE S.
PA   (NIED/) NIEDZWIECKI A.
PA   (RATH/) RATH M.
XX
PI   Netke S,  Niedzwiecki A,  Rath M;
XX
DR   WPI; 2003-897356/82.
XX
PT   New synthetic oligopeptide, useful for blocking or treating cancer
PT   invasion and metastases in a human patient, particularly as a vaccine for
PT   treating or preventing diagnosing brain cancer, lung cancer, skin cancer
PT   or breast cancer.
XX
PS   Example 1; Fig 1; 11pp; English.
XX
CC   The present invention relates to novel synthetic oligopeptides effective
CC   in blocking cancer invasion and metastasis. The invention relates to
CC   matrix metalloproteinase-2 (MMP-2) peptides. The synthetic oligopeptides
CC   are useful as pharmaceutical compositions for blocking or treating cancer
CC   invasion and metastases in a human patient. In particular, they are
CC   useful for treating brain cancer, lung cancer, skin cancer or breast
CC   cancer. The oligopeptides are also useful as vaccines for preventing
CC   these cancers, enhancing immune response or raising antibodies for assays
CC   used to diagnose diseases involving matrix metalloproteinases or clinical
CC   monitoring of the progression or regression of disease. They are also
CC   useful in gene therapy. The present sequence is the human MMP-2 protein.
XX
SQ   Sequence 631 AA;

  Query Match             100.0%;  Score 60;  DB 7;  Length 631;
  Best Local Similarity   100.0%;  Pred. No. 0.065;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         80 NYNFFPRKPK 89


RESULT 33
ADT05996
ID   ADT05996 standard; protein; 631 AA.
XX
AC   ADT05996;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Human mature matrix metalloprotease (MMP-2).
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; human;
KW   enzyme.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          410. .631
FT                   /note= "Corresponds to SEQ ID NO:17"
FT   Domain          439. .631
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to SEQ ID NO:18
FT   Region          439. .546
FT                   /note= "Corresponds to SEQ ID NO:20"
FT   Region          439. .512
FT                   /note= "Corresponds to SEQ ID NO:19"
FT   Region          510. .631
FT                   /note= "Corresponds to SEQ ID NO:21"
FT   Region          543. .631
FT                   /note= "Corresponds to SEQ ID NO:22"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents human mature matrix
```

CC metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC invention.
XX
SQ Sequence 631 AA;

Query Match 100.0%; Score 60; DB 8; Length 631;
Best Local Similarity 100.0%; Pred. No. 0.065;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 80 NYNFFPRKPK 89

RESULT 34
ADT05997
ID ADT05997 standard; protein; 633 AA.
XX
AC ADT05997;
XX
DT 30-DEC-2004 (first entry)
XX
DE Mouse mature matrix metalloprotease (MMP-2).
XX
KW Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW peptidomimetic; matrix metalloprotease 2; MMP-2; gelatinase; mouse;
KW murine; enzyme.
XX
OS Mus sp.
XX
FH Key Location/Qualifiers
FT Domain 441. .633
FT /label = Hemopexin_domain
XX
PN WO2004087057-A2.
XX
PD 14-OCT-2004.
XX
PF 26-MAR-2004; 2004WO-US009321.
XX
PR 28-MAR-2003; 2003US-00402212.
XX
PA (SCRI) SCRIPPS RES INST.
XX
PI Brooks PC, Cheresh DA;
XX
DR WPI; 2004-737508/72.
XX
PT Administration of composition comprising organic peptidomimetic alpha-v
PT beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS Example 2; Fig 7A-C; 184pp; English.
XX
CC The invention relates to a method of inhibiting angiogenesis in a tissue
CC by the administration of a composition comprising an organic
CC peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC receptor). The integrin alpha-V beta-3 antagonist and compositions
CC containing it are useful for inhibiting angiogenesis in a variety of
CC medical conditions. The antagonist may be used to induce the regression
CC of solid tumours or solid tumour metastases; to inhibit the growth of
CC solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC treat neovascularisation in retinal tissue (e.g., in diabetic
CC retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC cell migration (such as that which occurs following angioplasty); and to
CC reduce the blood supply to a tissue required to support new growth of the
CC tissue. The present sequence represents mouse mature matrix

CC metalloprotease 2 (MMP-2, gelatinase) used in an example of the
CC invention.
XX
SQ Sequence 633 AA;

Query Match 100.0%; Score 60; DB 8; Length 633;
Best Local Similarity 100.0%; Pred. No. 0.065;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 80 NYNFFPRKPK 89

RESULT 35
AAB20490
ID AAB20490 standard; protein; 644 AA.
XX
AC AAB20490;
XX
DT 21-JUN-2001 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP-2).
XX
KW Matrix metalloproteinase-2; MMP-2; human; pain; analgesic;
KW nerve tissue damage; stroke; haemorrhage; reperfusion injury;
KW cerebral ischaemia; cerebral infarction; narcotic tolerance;
KW narcotic withdrawal.
XX
OS Homo sapiens.
XX
PN WO200126671-A1.
XX
PD 19-APR-2001.
XX
PF 11-OCT-2000; 2000WO-US027949.
XX
PR 12-OCT-1999; 99US-0158787P.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Romanic Arnold A, Barone FC, Bingham S;
XX
DR WPI; 2001-290654/30.
DR N-PSDB; AAF30807.
XX
PT Polypeptide for the treatment of pain and the reduction of tissue damage
PT comprises an inhibitor of human matrix metalloproteinase.
XX
PS Claim 1; Fig 2; 61pp; English.
XX
CC The present sequence is that of human matrix metalloproteinase-2 (MMP-2),
CC previously known as 72 kDa gelatinase and gelatinase A. MMP-2 is capable
CC of degrading the extracellular matrix components of the basement
CC membrane. The invention relates to methods for treating pain in a patient
CC by administering a dual inhibitor of MMP-2 and MMP-9 (see AAB20491). The
CC administration of an inhibitor of MMP-2 is useful for treating nerve
CC tissue damage (claimed), where the patient is suffering from a disease or
CC disorder selected from stroke, haemorrhage, reperfusion injury, cerebral
CC ischaemia and cerebral infarction (claimed). The method is useful for
CC treating a disease, disorder or nerve tissue damage selected from
CC enhanced or exaggerated sensitivity to acute pain, burn pain, atypical
CC facial pain, neuropathic pain, back pain, complex regional pain syndrome
CC I and II, arthritic pain, sports injury pain, pain related to virus
CC infection, post-herpetic neuralgia, phantom limb pain, labour pain,
CC cancer pain, post-chemotherapy pain, post-operative pain, post-stroke
CC pain, physiological pain, inflammatory pain, acute inflammatory
CC conditions/visceral pain, neuralgia, painful diabetic retinopathy,
CC traumatic nerve injury, and tolerance to narcotics or withdrawal from
CC narcotics (claimed). MMP-2 polypeptides can also be used to screen for
CC agonist or antagonist (inhibitor) compounds
XX

```
SQ   Sequence 644 AA;

  Query Match             100.0%;  Score 60;  DB 4;  Length 644;
  Best Local Similarity   100.0%;  Pred. No. 0.067;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         93 NYNFFPRKPK 102


RESULT 36
AAR06420
ID   AAR06420 standard; protein; 660 AA.
XX
AC   AAR06420;
XX
DT   25-MAR-2003  (revised)
DT   13-DEC-1990  (first entry)
XX
DE   Type IV collagenase cDNA product.
XX
KW   hypertrophic scars; keloids; intervertebral disc disease; ds.
XX
OS   Homo sapiens.
XX
PN   US4923818-A.
XX
PD   08-MAY-1990.
XX
PF   15-MAY-1989;   89US-00352069.
XX
PR   15-MAY-1989;   89US-00352069.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Goldberg GL,  Eisen AZ;
XX
DR   WPI; 1990-245482/32.
DR   N-PSDB; AAQ05620.
XX
PT   Recombinant human type IV collagenase - used in treatment of hypertrophic
PT   scars, keloids and intervertebral disc disease.
XX
PS   Claim 3; Fig 9; 23pp; English.
XX
CC   cDNA clone enables production of type IV collagenase, useful in
CC   catalysing cleavage of extracellular matrix macromolecules, and in
CC   treatment of hypertrophic scars, keloids and invertebral disc disease.
CC   (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 37
AAB84607
ID   AAB84607 standard; protein; 660 AA.
XX
AC   AAB84607;
XX
DT   05-SEP-2001  (first entry)
XX
DE   Amino acid sequence of matrix metalloproteinase gelatinase A.
XX
KW   Growth factor; protein inhibitor; protease; damaged tissue;
KW   platelet-derived growth factor; PDGF; fibroblast growth factor; FGF;
KW   connective tissue derived growth factor; CTGF; chrysalin; VEGF;
KW   keratinocyte-derived growth factor; KGF; epidermal growth factor; EGF;
KW   transforming growth factor-beta; TGF-beta; matrix metalloproteinase; MMP;
KW   granulocyte macrophage colony stimulating factor; GM-CSF; uPA;
KW   vascular endothelial growth factor; urokinase plasminogen activator;
KW   dermal ulcer; wound.
XX
OS   Homo sapiens.
XX
PN   WO200149309-A2.
XX
PD   12-JUL-2001.
XX
PF   21-DEC-2000; 2000WO-IB001935.
XX
PR   29-DEC-1999;   99GB-00030768.
XX
PA   (PFIZ ) PFIZER LTD.
PA   (PFIZ ) PFIZER INC.
XX
PI   Davies MJ,  Huggins JP,  Mcintosh FS,  Occleston NL;
XX
DR   WPI; 2001-418351/44.
DR   N-PSDB; AAH28222.
XX
PT   Composition for the treatment of damaged tissue i.e. chronic wounds and
PT   dermal ulcers comprises an inhibitor agent i.e. a protease and a growth
PT   factor.
XX
PS   Disclosure; Page 552; 572pp; English.
XX
CC   The specification describes a pharmaceutical composition, comprising a
CC   growth factor, an inhibitor agent, i.e. a protease. The inhibitor agent
CC   inhibits the action of at least one specific adverse protein, i.e. a
CC   protease, that is upregulated in a damaged tissue such as a wound
CC   environment. Growth factors which are included in the composition of the
CC   invention are platelet-derived growth factor (PDGF), fibroblast growth
CC   factor (FGF), connective tissue derived growth factor (CTGF),
CC   keratinocyte-derived growth factor (KGF), transforming growth factor-beta
CC   (TGF-beta), granulocyte macrophage colony stimulating factor (GM-CSF),
CC   epidermal growth factor (EGF), vascular endothelial growth factor (VEGF),
CC   and chrysalin. Inhibitors which are included in the composition of the
CC   invention include inhibitors of urokinase-type plasminogen activator
CC   (uPA) and matrix metalloproteinase (MMP). The composition is useful for
CC   the treatment of chronic damaged tissue, i.e. wounds and dermal ulcers.
CC   The present sequence represents a human MMP-2, and is used to produce the
CC   composition of the invention
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 38
AAE10431
ID   AAE10431 standard; protein; 660 AA.
XX
AC   AAE10431;
XX
DT   10-DEC-2001  (first entry)
XX
DE   Human matrix metalloprotinase-2 (MMP-2) protein.
XX
KW   Human; matrix metalloproteinase; MMP-2; hair growth; antisense therapy;
KW   endopeptidase; skin cell; breast cancer; hair follicle; chromosome 11q22.
XX
```

OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .27
FT /label= Signal_peptide
FT Protein 28. .660
FT /label= Mature_MMP_2_protein
FT Domain 100. .106
FT /label= Cysteine_switch_domain
FT Domain 171. .195
FT /note= "Zinc and calcium binding domain"
XX
PN WO200166766-A2.
XX
PD 13-SEP-2001.
XX
PF 06-MAR-2001; 2001WO-US007167.
XX
PR 06-MAR-2000; 2000US-0187196P.
XX
PA (DARW-) DARWIN MOLECULAR CORP.
PA (SCHA/) SCHATZMAN R.
XX
PI Fajardo M, Wang K, Smith R, Moss P;
XX
DR WPI; 2001-582276/65.
XX
PT Novel isolated matrix metalloproteinase-25 nucleic acid molecule and
PT proteins encoded by them whose inhibition is useful for modulation of
PT hair growth in mammals.
XX
PS Example 2; Fig 3; 119pp; English.
XX
CC The present sequence is human matrix metalloproteinase (MMP)-2 protein
CC used in the exemplification of the invention. MMP-25 DNA is located on
CC chromosome 11q22. Matrix metalloproteinases are a family of zinc
CC dependent endopeptidases that function extracellularly to degrade
CC proteins typically found in the extracellular matrix. MMP-25 is expressed
CC in skin cells of mammals, particularly in breast cells and hair
CC follicles. MMP-25 DNA is useful for identifying a nucleic acid molecule
CC encoding all or part of MMP by hybridising MMP-25 to a nucleic acid
CC sample and identifying a sequence that hybridises in the nucleic acid
CC sample. The identification step involves performing polymerase chain
CC reaction (PCR) to amplify the hybridising sequence. MMP-25 antibody is
CC useful for identifying type 25 MMP. MMP-25 protein inhibitors may be used
CC to modulate hair growth and breast cancer in a mammal
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 4; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 39
ABB79413
ID ABB79413 standard; protein; 660 AA.
XX
AC ABB79413;
XX
DT 08-JUL-2002 (first entry)
XX
DE Human matrix metalloproteinase 2 protein.
XX
KW Human; matrix metalloproteinase-2; MMP-2; enzyme; thrombolytic;
KW anticoagulant; cardiant; antiarteriosclerotic; cytostatic; osteopathic;
KW antiinflammatory; antibacterial; virucide; fungicide; antipsoriatic;
KW vulnerary; cerebroprotective; antianginal; ophthalmological;
KW antirheumatic; antiarthritic; antiulcer; vasotropic; nephrotropic;
KW alpha-v-beta-3 integrin receptor; thrombosis; tumour; osteoporosis;
KW infection; veterinary medicine; rheumatoid arthritis; Crohn's disease;
KW antimicrobial; antiseptic.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 466. .660
FT /label= PEX
FT Binding-site 489. .497
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 570. .585
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
FT Binding-site 588. .597
FT /label= alpha-v-beta-3_integrin_receptor_binding_site
XX
PN WO200220566-A2.
XX
PD 14-MAR-2002.
XX
PF 28-AUG-2001; 2001WO-EP009899.
XX
PR 07-SEP-2000; 2000DE-01044325.
XX
PA (MERE) MERCK PATENT GMBH.
XX
PI Jonczyk A, Diefenbach B, Groth U, Zischinsky G;
XX
DR WPI; 2002-329868/36.
XX
PT New matrix metalloprotease-2 derivative peptides, are alpha-v-beta-3
PT integrin receptor inhibitors useful e.g. for treating thrombosis, cardiac
PT infarction, tumors, osteoporosis, inflammation or infections.
XX
PS Disclosure; Page 11; 35pp; German.
XX
CC The invention relates to peptides (ABB79414-ABB79426) derived from the C-
CC terminal fragment PEX of matrix metalloprotease-2 (MMP-2). Matrix MMP-2
CC derivatives of formula X-Y-Z (I) and their salts and solvates are
CC described. X = H, 1-10C alkanoyl or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues; Y = peptide fragment selected
CC from the sequence region 466-660 of human Pro-MMP-2; and Z = OH, NH_2, NH
CC -1-10C alkyl N(1-10C alkyl)_2 or peptide fragment consisting of 1-20
CC naturally occurring amino acid residues. Primary amino groups are
CC optionally protected conventionally. The peptides and MMP-2 derivatives
CC are used for combating diseases involving interaction of ligands
CC (specifically MMP-2) with the alpha-v-beta-3 integrin receptor,
CC especially pathological processes supported or propagated by
CC angiogenesis, thrombosis, cardiac infarction, coronary heart disease,
CC arteriosclerosis, tumours, osteoporosis, fibrosis, inflammation,
CC infections, psoriasis or wound healing deficiency. More generally the
CC peptides and MMP-2 derivatives are useful in human and veterinary
CC medicine for the treatment and/or prophylaxis of thrombosis, myocardial
CC infarction, apoplexy, angina pectoris, tumour diseases, osteolytic
CC diseases (e.g. osteoporosis or hypercalcaemia), pathological angiogenic
CC diseases (e.g. inflammation), ophthalmological diseases (e.g. diabetic
CC retinopathy, macular degeneration, myopia, ocular histoplasmosis or
CC rubeotic glaucoma), rheumatoid arthritis, osteoarthritis, ulcerative
CC colitis, Crohn's disease, atherosclerosis, psoriasis, restenosis after
CC angioplasty, viral, bacterial or fungal infections, acute renal failure
CC or wound healing deficiency; as antimicrobial/antiseptic agents in
CC operations involving biomaterials, implants, catheters or cardiac
CC pacemakers); or as diagnostic agents or reagents. The present sequence is
CC that of the human MMP-2 protein
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 5; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||

```
Db        109 NYNFFPRKPK 118


RESULT 40
ABB90738
ID   ABB90738 standard; protein; 660 AA.
XX
AC   ABB90738;
XX
DT   30-MAY-2002  (first entry)
XX
DE   Human Tumour Endothelial Marker polypeptide SEQ ID NO 208.
XX
KW   Human; mouse; rat; TEM; tumour endothelial marker; NEM; PEM; cytostatic;
KW   normal endothelial marker; pan-endothelial marker; immunostimulant;
KW   antiangiogenic; tumour; neoangiogenesis; vascularised tumour;
KW   polycystic kidney disease; diabetes; retinopathy; rheumatoid arthritis;
KW   psoriasis.
XX
OS   Homo sapiens.
XX
PN   WO200210217-A2.
XX
PD   07-FEB-2002.
XX
PF   01-AUG-2001; 2001WO-US024031.
XX
PR   02-AUG-2000; 2000US-0222599P.
PR   11-AUG-2000; 2000US-0224360P.
PR   11-APR-2001; 2001US-0282850P.
XX
PA   (UYJO ) UNIV JOHNS HOPKINS.
XX
PI   St Croix B,  Kinzler KW,  Vogelstein B;
XX
DR   WPI; 2002-291856/33.
DR   N-PSDB; ABL92092.
XX
PT   An isolated molecule comprising an antibody variable region which
PT   specifically binds to an extracellular domain of a tumor endothelial
PT   marker (TEM) protein, useful for inhibiting tumor growth.
XX
PS   Claim 54; Page 166-168; 331pp; English.
XX
CC   The invention relates to an isolated molecule comprising an antibody
CC   variable region which specifically binds to an extracellular domain of a
CC   tumour endothelial marker (TEM) protein selected from ABB90732, ABB90740,
CC   ABB90749, ABB90750 and ABB90769. The antibodies which bind to TEM
CC   proteins have cytostatic, immunostimulant and antiangiogenic activity.
CC   They are useful for inhibiting tumour growth, neoangiogenesis in subjects
CC   bearing a vascularised tumour, polycystic kidney disease, diabetic
CC   retinopathy, rheumatoid arthritis and psoriasis. Human, mouse and rat TEM
CC   genes and the encoded proteins (ABL92075-ABL92141 and ABB90721-ABB90789)
CC   are disclosed, as are marker oligonucleotide sequences: tumour
CC   endothelial markers (TEM) ABL91996-ABL92041 and ABL92143-ABL92191; normal
CC   endothelial markers (NEM) ABL92042-ABL92074; and pan-endothelial markers
CC   (PEM) ABL91903-ABL91995
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 41
AAU84348
ID   AAU84348 standard; protein; 660 AA.
XX
AC   AAU84348;
XX
DT   08-MAY-2002  (first entry)
XX
DE   Protein MMP2 differentially expressed in breast cancer tissue.
XX
KW   Human; diagnosis of breast cancer; endometrial cancer; breast tumour;
KW   MAI; mitotic activity index; cytostatic.
XX
OS   Homo sapiens.
XX
PN   WO200210436-A2.
XX
PD   07-FEB-2002.
XX
PF   27-JUL-2001; 2001WO-US023642.
XX
PR   28-JUL-2000; 2000US-0222093P.
XX
PA   (BGHM ) BRIGHAM & WOMENS HOSPITAL INC.
PA   (BAAK/) BAAK J.
XX
PI   Baak J,  Mutter GL;
XX
DR   WPI; 2002-180084/23.
DR   N-PSDB; ABK35568.
XX
PT   Diagnosing breast cancer comprises determining expression of nucleic acid
PT   molecules or expression products that are differentially expressed in
PT   normal and malignant tissue.
XX
PS   Claim 37; Page 185-187; 219pp; English.
XX
CC   The present invention relates to a method for diagnosing breast cancer in
CC   a subject suspected of having endometrial cancer. The method comprises
CC   determining the expression of a set of human genes or expression products
CC   in an endometrial sample suspected of being cancerous. The human genes of
CC   the invention are differentially expressed in breast tumours
CC   characterised as high or low MAI (mitotic activity index). These sets of
CC   genes can be used to discriminate between high and low MAI breast
CC   tumours. The invention also provides DNA and protein microarrays for
CC   analysing the expression of the human genes and their protein products.
CC   The methods and arrays are useful for the diagnosis and prognosis of
CC   endometrial cancer, selecting and monitoring treatment regimes, and
CC   identification of compounds useful for the treatment of endometrial
CC   cancer. AAU84311-AAU84361 represent the human proteins of the invention
CC   that are differentially expressed in breast cancer tissue
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 42
ABU54445
ID   ABU54445 standard; protein; 660 AA.
XX
AC   ABU54445;
XX
DT   12-MAR-2003  (first entry)
XX
DE   Human tumour endothelial marker TEM 7.
XX
KW   Human; endothelial cell; EC; tumour endothelial cell; TEM; NEM;
KW   Tumour endothelial marker; normal endothelial marker; PEM;
KW   pan-endothelial marker; polycystic kidney disease; psoriasis;
KW   diabetic retinopathy; rheumatoid arthritis; tumour angiogenesis;
```

KW neoangiogenesis; immune response; cytostatic; antidiabetic;
KW ophthalmological; antirheumatic; antiarthritic; antipsoriatic.
XX
OS Homo sapiens.
XX
PN WO200283874-A2.
XX
PD 24-OCT-2002.
XX
PF 10-APR-2002; 2002WO-US008253.
XX
PR 11-APR-2001; 2001US-0282850P.
PR 06-FEB-2002; 2002US-0354262P.
XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI Carson-Walter E, St Croix B, Kinzler KW, Vogelstein B;
XX
DR WPI; 2003-093016/08.
DR N-PSDB; ABX72017.
XX
PT New purified human transmembrane protein, designated as tumor endothelial
PT marker (TEM) 3, useful for detecting, diagnosing or treating tumors,
PT polycystic kidney disease, diabetic retinopathy, rheumatoid arthritis or
PT psoriasis.
XX
PS Disclosure; Page 173-174; 374pp; English.
XX
CC The present invention relates to a novel method for the isolation of
CC endothelial cells (ECs), and the identification of genes expressed in
CC normal and tumour ECs. Tumour endothelial marker (TEM), normal
CC endothelial marker (NEM), and pan-endothelial marker (PEM) genes are
CC identified in human ECs. The human EC marker proteins and the
CC polynucleotide sequences encoding them are useful for detecting,
CC diagnosing or treating tumours as well as polycystic kidney disease,
CC diabetic retinopathy, rheumatoid arthritis, and psoriasis. They are also
CC useful for inhibiting neoangiogenesis or tumour angiogenesis, for
CC inducing an immune response to tumour endothelial cells in a patient, or
CC for identifying candidate drugs for treating tumours. The present
CC sequence represents a human TEM or NEM protein of the invention
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 43
ABP97136
ID ABP97136 standard; protein; 660 AA.
XX
AC ABP97136;
XX
DT 24-JUN-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 protein SEQ ID NO:14.
XX
KW Human; matrix metalloproteinase; MMP; anticancer; wound healing;
KW matrix metalloproteinase inhibitor; antitumour; antiangiogenic; cardiant;
KW vascular endothelial growth factor inhibitor; VEGF inhibitor; cytostatic;
KW vulnerary; cerebroprotective; antidiabetic; ophthalmological; tumour;
KW dermatological; metastatic; non-metastatic; vascularised; heart disease;
KW non-vascularised; surgical incision; chronic wound; stroke; angiogenesis;
KW macular degeneration; diabetic retinopathy; cleavage region.
XX
OS Homo sapiens.
XX
PN WO2003018748-A2.
XX
PD 06-MAR-2003.
XX
PF 15-AUG-2002; 2002WO-US026319.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Weart IF;
XX
DR WPI; 2003-381408/36.
XX
PT Anti-angiogenic composition comprising peptide inhibitor of matrix
PT metalloproteinase, useful for decreasing the expression of vascular
PT endothelial growth factor and treating cancers and tissue injuries.
XX
PS Example 1; Page 43-44; 103pp; English.
XX
CC The present invention describes an anti-angiogenic composition (I) for
CC inhibiting expression of vascular endothelial growth factor (VEGF). (I)
CC comprises an effective amount of a peptide inhibitor of matrix
CC metalloproteinase (MMP), where the peptide can inhibit the expression of
CC VEGF. (I) has cytostatic, vulnerary, cardiant, cerebroprotective,
CC antidiabetic, ophthalmological and dermatological activities. (I) can be
CC used for inhibiting expression of VEGF, and so can be used for inhibiting
CC growth of tumours and diminishing tumours size. The tumour can be
CC metastatic, non-metastatic, vascularised, non-vascularised, hard or soft.
CC (I) is also useful for treating injuries including wounds, surgical
CC incisions, chronic wounds, heart diseases and stroke. (I) is also useful
CC for treating disorders characterised by excessive angiogenesis e.g.
CC macular degeneration and diabetic retinopathy. The present sequence
CC represents the human MMP-2 protein, which is used in the exemplification
CC of the present invention
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 44
AAO16608
ID AAO16608 standard; protein; 660 AA.
XX
AC AAO16608;
XX
DT 08-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase 2 (MMP2) gelatinase protein.
XX
KW Human; enzyme; crystalline polypeptide; matrix metalloproteinase 9; MMP9;
KW gelatinase; metalloproteinase mediated disease; drug design; arthritis;
KW three-dimensional structure; MMP9 inhibitor; tumour growth;
KW cancer metastasis; osteoarthritis; atherosclerosis; restenosis;
KW periodontitis; multiple sclerosis; glomerulonephritis; MMP9 modulator;
KW graft-versus-host disease; non-insulin dependent diabetes; MMP2;
KW matrix metalloproteinase 2.
XX
OS Homo sapiens.
XX
PN WO2003002729-A1.
XX
PD 09-JAN-2003.
XX
PF 24-JUN-2002; 2002WO-SE001266.

XX
PR 27-JUN-2001; 2001SE-00002298.
XX
PA (ASTR) ASTRAZENECA AB.
XX
PI Jepson H, Minshull C, Pauptit R, Rowsell S;
XX
DR WPI; 2003-201502/19.
XX
PT Novel crystalline form of a polypeptide corresponding to the catalytic
PT domain of matrix metalloproteinase 9 protein, useful for selecting or
PT designing chemical modulators which are used for treating diabetes,
PT cancer, arthritis.
XX
PS Disclosure; Fig 7; 227pp; English.
XX
CC The invention comprises a crystalline form of a polypeptide corresponding
CC to the catalytic domain of matrix metalloproteinase 9 (MMP9) protein - a
CC gelatinase. The crystalline polypeptide of the invention is useful for
CC treating a metalloproteinase mediated disease or condition in a warm-
CC blooded animal. The crystalline polypeptide is also useful for
CC determining the three-dimensional structure of the MMP9 catalytic domain
CC to high resolution. The three-dimensional structure of the MMP9 catalytic
CC domain is useful for rational drug design, and the atomic coordinates of
CC the catalytic domain of MMP9 are useful for selecting or designing
CC chemical modulators (preferably inhibitors) of MMP9. The crystalline
CC polypeptide of the invention is useful in the treatment of a
CC metalloproteinase mediated disease or condition, such as: tumour growth;
CC metastasis in cancer; arthritis; osteoarthritis; atherosclerosis;
CC restenosis; periodontitis; multiple sclerosis; glomerulonephritis; graft-
CC versus-host disease; and non-insulin dependent diabetes. The present
CC amino acid sequence represents a human matrix metalloproteinase 2 (MMP2)
CC protein
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 45
ABG76322
ID ABG76322 standard; protein; 660 AA.
XX
AC ABG76322;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human matrix metalloproteinase-2 (MMP-2).
XX
KW Human; peptide inhibitor; matrix metalloproteinase-2; MMP-2;
KW cleavage region; proenzyme form; cellular proliferation; fibroblast;
KW keratinocyte; healthy skin development; wound healing; scarring;
KW skin tone; wrinkle; anti-aging; vulnerary.
XX
OS Homo sapiens.
XX
PN WO2003016520-A1.
XX
PD 27-FEB-2003.
XX
PF 15-AUG-2002; 2002WO-US026198.
XX
PR 16-AUG-2001; 2001US-0312726P.
PR 21-DEC-2001; 2001US-00032376.
PR 21-MAY-2002; 2002US-00153185.
XX
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC.
XX
PI Quirk S, Malik S, Villanueva JM;
XX
DR WPI; 2003-289980/28.
XX
PT Novel peptide inhibitor of proteinase activity of matrix
PT metalloproteinases, e.g. matrix metalloproteinase-2, useful for
PT stimulating cellular proliferation of fibroblasts or keratinocytes.
XX
PS Example 1; Page 41-42; 120pp; English.
XX
CC The present invention relates to peptide inhibitors of metalloproteinases
CC (MMPs), particularly metalloproteinase-2 (MMP-2). The inhibitors have
CC peptide sequences related to the cleavage regions of the proenzyme forms
CC of the MMPS. The peptide inhibitors are useful for stimulating cellular
CC proliferation of fibroblasts or keratinocytes, promoting healthy skin
CC development, treating wounds, preventing scarring, improving skin tone,
CC reducing wrinkling and for simulating the development of smooth, healthy
CC skin. The peptide inhibitors are useful as anti-aging and wound healing
CC compounds. The present sequence represents human MMP-2
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 6; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 46
ADD18578
ID ADD18578 standard; protein; 660 AA.
XX
AC ADD18578;
XX
DT 15-JAN-2004 (first entry)
XX
DE Human disease related protein SeqID9.
XX
KW human; disease state; cytostatic; antiinflammatory; ophthalmological;
KW antiarteriosclerotic; vulnerary; gene therapy;
KW hypoxia-regulated condition; tumourigenesis; angiogenesis; apoptosis;
KW inflammation; erythropoiesis; glycolysis; gluconeogenesis;
KW glucose transportation; catecholamine synthesis; iron transport;
KW nitric oxide synthesis; cancer; ischaemic condition; reperfusion injury;
KW retinopathy; neonatal stress; pre-eclampsia; atherosclerosis;
KW inflammatory condition; wound healing.
XX
OS Homo sapiens.
XX
PN WO2003018621-A2.
XX
PD 06-MAR-2003.
XX
PF 23-AUG-2002; 2002WO-GB003892.
XX
PR 23-AUG-2001; 2001GB-00020558.
PR 05-OCT-2001; 2001GB-00024037.
XX
PA (OXFO-) OXFORD BIOMEDICA UK LTD.
XX
PI Kingsman SM, White J, Ward NR, Harris RA, Naylor S, Mundy CR;
XX
DR WPI; 2003-290046/28.
DR N-PSDB; ADD18579.
XX
PT New substantially purified polypeptide, useful for diagnosing or treating
PT a hypoxia-regulated condition, such as cancer, ischemia, reperfusion
PT injury, retinopathy, pre-eclampsia, atherosclerosis, inflammation, or
PT wound healing.

XX
PS Claim 25; SEQ ID NO 9; 424pp; English.
XX
CC This invention relates to novel human genes and gene product which are
CC implicated in certain disease states. Compounds which modulate the
CC proteins of the invention may have cytostatic, antiinflammatory,
CC ophthalmological, antiarteriosclerotic or vulnerary activities. The
CC sequences of the invention may be useful for gene therapy. The invention
CC may be useful for diagnosing or treating a hypoxia-regulated condition,
CC such as tumourigenesis, angiogenesis, apoptosis, inflammation,
CC erythropoiesis, or the biological response to hypoxia conditions
CC including processes such as glycolysis, gluconeogenesis, glucose
CC transportation, catecholamine synthesis, iron transport or nitric oxide
CC synthesis. The disease includes cancer, ischaemic conditions, reperfusion
CC injury, retinopathy, neonatal stress, pre-eclampsia, atherosclerosis,
CC inflammatory conditions or wound healing. The present sequence is that of
CC a disease related protein of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 47
ADP65244
ID ADP65244 standard; protein; 660 AA.
XX
AC ADP65244;
XX
DT 12-AUG-2004 (first entry)
XX
DE Human matrix metalloproteinase 2 preproprotein, gelatinase A, 72kD type.
XX
KW autoimmune disease; arthritide; gene expression analysis;
KW rheumatoid arthritis; collagen-induced; immunosuppressive; antirheumatic;
KW antiarthritic; osteopathic; antigout; antiinflammatory; dermatological;
KW immunomodulatory; lupus; ankylosing spondylitis; Fibrositis;
KW fibromyalgia; osteoarthritis; gout; juvenile rheumatoid arthritis;
KW immune; human.
XX
OS Homo sapiens.
XX
PN WO2003072827-A1.
XX
PD 04-SEP-2003.
XX
PF 31-OCT-2002; 2002WO-US035433.
XX
PR 31-OCT-2001; 2001US-0336220P.
XX
PA (CHIL-) CHILDREN'S HOSPITAL MEDICAL CENT.
XX
PI Hirsch R, Thorton SL;
XX
DR WPI; 2003-712740/67.
DR GENBANK; NP_004521.
XX
PT Diagnosing and analyzing autoimmune disease using gene expression
PT profiles and microarray technology, useful for diagnosing and treating
PT rheumatoid arthritis, lupus, fibrositis, osteoarthritis, fibromyalgia and
PT gout.
XX
PS Disclosure; Page; 56pp; English.
XX
CC The invention relates to a novel method for diagnosing and analysing
CC autoimmune disease or arthritides. The method comprises obtaining a
CC patient sample containing mRNA, analysing gene expression using the mRNA
CC that results in a gene expression signature of the mRNA, and using that
CC gene expression signature to diagnose or analyse the autoimmune disease
CC or arthritides in the patient, where gene expression of at least 60% of
CC the genes correlates with that of the gene signature. The invention
CC further comprises: a treatment of rheumatoid arthritis; identification of
CC genes for targeting in the treatment of rheumatoid arthritis in a mammal
CC other than a mouse; diagnosis of rheumatoid arthritis in a mammal; an
CC array or gene chip, specific for rheumatoid arthritis; diagnosis or
CC analyses of autoimmune disease or rheumatoid arthritis; screening the
CC efficacy of a candidate drug in vitro for the treatment of collagen-
CC induced arthritis; and reducing the symptoms associated with collagen-
CC induced arthritis. The compositions of the invention have the following
CC activities: immunosuppressive, antirheumatic, antiarthritic, osteopathic,
CC antigout, antiinflammatory, dermatological, and immunomodulatory. The
CC methods and compositions of the present invention are useful for
CC diagnosing and treating autoimmune disease or arthritides, such as
CC rheumatoid arthritis, lupus, ankylosing spondylitis, fibrositis,
CC fibromyalgia, osteoarthritis, gout, juvenile rheumatoid arthritis, and an
CC immune disease caused by an infectious agent. This sequence represents a
CC protein sequence relating to the genes used in the analysis and treatment
CC of autoimmune diseases or arthritides. Note: This sequence is not shown
CC in the specification. It has been supplied in an electronic format from
CC WIPO.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 48
ADN07697
ID ADN07697 standard; protein; 660 AA.
XX
AC ADN07697;
XX
DT 01-JUL-2004 (first entry)
XX
DE Human matrix matalloproteinase 2 protein.
XX
KW Protease; stem cell; bone marrow failure disorder; aplastic anaemia;
KW myeloproliferative disorder; multiple myeloma; gene therapy; human;
KW matrix metalloproteinase; MMP; enzyme.
XX
OS Homo sapiens.
XX
PN US2004071687-A1.
XX
PD 15-APR-2004.
XX
PF 28-MAY-2003; 2003US-00447315.
XX
PR 28-MAY-2002; 2002US-0383658P.
XX
PA (RAFI/) RAFII S.
PA (HEIS/) HEISSIG B.
PA (HATT/) HATTORI K.
XX
PI Rafii S, Heissig B, Hattori K;
XX
DR WPI; 2004-328523/30.
DR N-PSDB; ADN07698.
DR GENBANK; 11342666.
XX
PT Recruiting adult stem cells in an animal for treating aplastic anemia or
PT multiple myeloma by administering a protease or its activator so that the
PT stem cells can proliferate, self-renew, differentiate or mobilize to a
PT target site.

```
XX
PS   Disclosure; SEQ ID NO 3; 77pp; English.
XX
CC   The present invention relates to the use of proteases to recruit stem
CC   cells from the niches they normally occupy. The invention is useful for
CC   recruiting adult stem cells for treating bone marrow failure disorder
CC   such as aplastic anaemia and myeloproliferative disorder such as multiple
CC   myeloma. The invention is also useful in gene therapy. The present
CC   sequence is human matrix metalloproteinase (MMP) protein.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 8;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 49
ADQ17097
ID   ADQ17097 standard; protein; 660 AA.
XX
AC   ADQ17097;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Human matrix metalloproteinase-2 (MMP2) protein.
XX
KW   Fibronectin; healthy skin; wrinkle; wound; vulnerary; dermatological;
KW   human; matrix metalloproteinase; MMP.
XX
OS   Homo sapiens.
XX
PN   US2004127421-A1.
XX
PD   01-JUL-2004.
XX
PF   30-DEC-2002; 2002US-00335207.
XX
PR   30-DEC-2002; 2002US-00335207.
XX
PA   (MALI/) MALIK S.
PA   (QUIR/) QUIRK S.
XX
PI   Malik S,  Quirk S;
XX
DR   WPI; 2004-506456/48.
XX
PT   Composition used for preventing and treating wrinkles and treating wounds
PT   comprises peptide having sequence related to matrix metalloproteinase
PT   proenzyme.
XX
PS   Example 1; SEQ ID NO 14; 60pp; English.
XX
CC   The present invention provides peptides and compositions containing such
CC   peptides that are useful as agents to maintain healthy skin and to
CC   promote the condition of the skin. The invention is useful for increasing
CC   the amount of fibronectin in tissue. The invention is also useful for
CC   encouraging the maintenance and development of healthy skin, preventing
CC   and treating wrinkles and for treating wounds. The invention acts as
CC   vulnerary and dermatological agents. The present sequence is human matrix
CC   metalloproteinase-2 (MMP2) protein. This sequence is used in the
CC   exemplification of the invention.
XX
SQ   Sequence 660 AA;

  Query Match             100.0%;  Score 60;  DB 8;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 50
ADV90301
ID   ADV90301 standard; protein; 660 AA.
XX
AC   ADV90301;
XX
DT   10-MAR-2005  (first entry)
XX
DE   Protease-hydrolysed polypeptide #78.
XX
KW   Protease; immune disorder; inflammation; musculoskeletal disease;
KW   dermatological disease; gastrointestinal disease; endocrine disease;
KW   metabolic disorder; cancer; hematological disease;
KW   cardiovascular disease; neurological disease; neurodegenerative disease;
KW   growth disorder; respiratory disease; genitourinary disease;
KW   gynecological disorder; nutritional disorder; infection; cytostatic;
KW   gastrointestinal-gen.; antiinflammatory; antiasthmatic; analgesic;
KW   antiarthritic; osteopathic; antidiabetic; nephrotropic;
KW   cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipsoriatic;
KW   antiallergic; dermatological; enzyme; hydrolysis.
XX
OS   Homo sapiens.
XX
PN   WO2004113522-A1.
XX
PD   29-DEC-2004.
XX
PF   18-JUN-2004; 2004WO-EP051173.
XX
PR   18-JUN-2003; 2003EP-00013819.
PR   10-NOV-2003; 2003EP-00025851.
PR   11-NOV-2003; 2003EP-00025871.
PR   11-FEB-2004; 2004EP-00003058.
XX
PA   (DIRE-) DIREVO BIOTECH AG.
XX
PI   Haupts U,  Koltermann A,  Scheidig A,  Voetsmeier C,  Kettling U;
XX
DR   WPI; 2005-057985/06.
XX
PT   Proteases with defined specificity for a target substrate useful for
PT   treating a specific disease related to the target substrate, such as
PT   cancer, asthma, diabetes, inflammatory disorders and psoriasis.
XX
PS   Claim 43; SEQ ID NO 131; 250pp; English.
XX
CC   The invention relates to the use of a protease with defined specificity
CC   for a target substrate for preparing a medicament for the treatment of a
CC   specific disease related to the target substrate. The invention also
CC   relates to a pharmaceutical or diagnostic composition comprising one or
CC   more enzymes in the use cited, optionally comprising pharmaceutically or
CC   diagnostically acceptable carriers, excipients and/or auxiliary agents, a
CC   method for cleaving a target substrate in vivo or in vitro comprising
CC   contacting the target substrate with a protease as cited in the use
CC   mentioned, and a method for treatment of a disease in a patient connected
CC   with a specific target substrate comprising administering to the patient
CC   a protease with defined specificity for the specific target substrate.
CC   The protease hydrolyzes the target substrate and eliminates or reduces
CC   one or more biological activities, physico-chemical properties or
CC   pharmacological properties of the target protein and/or activates or
CC   increases one or more biological activities, physico-chemical properties
CC   or pharmacological properties of the target protein, and/or adds one or
CC   more biological activities, physico-chemical properties or
CC   pharmacological properties to the target protein. The protease may be
CC   administered to treat immune disorders, inflammatory disorders,
CC   musculoskeletal diseases, dermatological diseases, gastrointestinal
CC   diseases, endocrine diseases, metabolic disorder, cancers, hematological
CC   diseases, cardiovascular diseases, neurological diseases,
```

CC neurodegenerative diseases, growth disorders, respiratory diseases,
CC genitourinary diseases, gynecological disorders, nutritional disorders
CC and infections. This sequence represents a polypeptide hydrolysed by a
CC protease used in the scope of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 9; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 51
ADV68478
ID ADV68478 standard; protein; 660 AA.
XX
AC ADV68478;
XX
DT 10-MAR-2005 (first entry)
XX
DE Human matrix metalloproteinase-2 protein SeqID14.
XX
KW cell growth; pharmaceutical; cytostatic; metalloprotease 1 inhibitor;
KW metalloprotease 2 inhibitor; metalloprotease 3 inhibitor;
KW metalloprotease 4 inhibitor; metalloprotease 5 inhibitor;
KW metalloprotease 6 inhibitor; metalloprotease 7 inhibitor;
KW metalloprotease 8 inhibitor; metalloprotease 9 inhibitor;
KW metalloprotease 10 inhibitor; metalloprotease 11 inhibitor;
KW metalloprotease 12 inhibitor; metalloprotease 13 inhibitor;
KW metalloprotease inhibitor; bone tumor; sarcoma.
XX
OS Homo sapiens.
XX
PN US2004259802-A1.
XX
PD 23-DEC-2004.
XX
PF 20-JUN-2003; 2003US-00601059.
XX
PR 20-JUN-2003; 2003US-00601059.
XX
PA (YANG/) YANG S.
PA (QUIR/) QUIRK S.
XX
PI Yang S, Quirk S;
XX
DR WPI; 2005-047374/05.
XX
PT A composition for decreasing and inhibiting the growth of chondrosarcoma
PT cells, useful for treating chondrosarcomas and bone cancer, comprises a
PT matrix metalloproteinase inhibitor.
XX
PS Example 1; SEQ ID NO 14; 50pp; English.
XX
CC This invention relates to a novel composition for inhibiting growth of
CC chondrosarcoma cells comprising an amount of a peptide and a
CC pharmaceutical carrier. The invention may be useful for the production of
CC compounds with a cytostatic activity acting as metalloprotease 1
CC inhibitors, metalloprotease 2 inhibitors, metalloprotease 3 inhibitors,
CC metalloprotease 4 inhibitors, metalloprotease 5 inhibitors,
CC metalloprotease 6 inhibitors, metalloprotease 7 inhibitors,
CC metalloprotease 8 inhibitors, metalloprotease 9 inhibitors,
CC metalloprotease 10 inhibitors, metalloprotease 11 inhibitors,
CC metalloprotease 12 inhibitors, metalloprotease 13 inhibitors or
CC metalloprotease inhibitors. The composition is useful for decreasing and
CC inhibiting the growth of chondrosarcoma cells which in turn inhibits
CC growth of a bone tumor or diminishes a size of a bone tumor, useful for
CC treating chondrosarcomas and bone cancers. The present sequence is that
CC of a human matrix metalloproteinase which may be used during the
CC development of a composition of the invention.
XX
SQ Sequence 660 AA;

Query Match 100.0%; Score 60; DB 9; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.068;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 109 NYNFFPRKPK 118

RESULT 52
ADE62857
ID ADE62857 standard; protein; 662 AA.
XX
AC ADE62857;
XX
DT 29-JAN-2004 (first entry)
XX
DE Rat Protein P33436, SEQ ID NO 8791.
XX
KW Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
OS Rattus norvegicus.
XX
PN WO2003016475-A2.
XX
PD 27-FEB-2003.
XX
PF 14-AUG-2002; 2002WO-US025765.
XX
PR 14-AUG-2001; 2001US-0312147P.
PR 01-NOV-2001; 2001US-0346382P.
PR 26-NOV-2001; 2001US-0333347P.
XX
PA (GEHO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
XX
PI Woolf C, D'urso D, Befort K, Costigan M;
XX
DR WPI; 2003-268312/26.
DR GENBANK; P33436.
XX
PT New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
XX
PS Claim 1; Page; 1017pp; English.
XX
CC The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC that is differentially expressed in neuronal tissue of a first animal
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene

```
CC   therapy). The sequence presented is a rat protein (shown in Table 2 of
CC   the specification) which is differentially expressed during pain. Note:
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic form directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 662 AA;

  Query Match             100.0%;  Score 60;  DB 7;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 53
ADD46270
ID   ADD46270 standard; protein; 662 AA.
XX
AC   ADD46270;
XX
DT   29-JAN-2004  (first entry)
XX
DE   Rat Protein P33436, SEQ ID NO 11945.
XX
KW   Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KW   chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
OS   Rattus norvegicus.
XX
PN   WO2003016475-A2.
XX
PD   27-FEB-2003.
XX
PF   14-AUG-2002; 2002WO-US025765.
XX
PR   14-AUG-2001; 2001US-0312147P.
PR   01-NOV-2001; 2001US-0346382P.
PR   26-NOV-2001; 2001US-0333347P.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
PA   (FARB ) BAYER AG.
XX
PI   Woolf C,  D'urso D,  Befort K,  Costigan M;
XX
DR   WPI; 2003-268312/26.
DR   GENBANK; P33436.
XX
PT   New composition comprising two or more isolated polypeptides, useful for
PT   preparing a medicament for treating pain in an animal.
XX
PS   Claim 1; Page; 1017pp; English.
XX
CC   The invention discloses a composition comprising two or more isolated rat
CC   or human polynucleotides or a polynucleotide which represents a fragment,
CC   derivative or allelic variation of the nucleic acid sequence. Also
CC   claimed are a vector comprising the novel polynucleotide, a host cell
CC   comprising the vector, a method for identifying a nucleotide sequence
CC   which is differentially regulated in an animal subjected to pain and a
CC   kit to perform the method, an array, a method for identifying an agent
CC   that increases or decreases the expression of the polynucleotide sequence
CC   that is differentially expressed in neuronal tissue of a first animal
CC   subjected to pain, a method for identifying a compound which regulates
CC   the expression of a polynucleotide sequence which is differentially
CC   expressed in an animal subjected to pain, a method for identifying a
CC   compound that regulates the activity of one or more of the
CC   polynucleotides, a method for producing a pharmaceutical composition, a
CC   method for identifying a compound or small molecule that regulates the
CC   activity in an animal of one or more of the polypeptides given in the
CC   specification, a method for identifying a compound useful in treating
CC   pain and a pharmaceutical composition comprising the one or more
CC   polypeptides or their antibodies. The polynucleotide or the compound that
CC   modulates its activity is useful for preparing a medicament for treating
CC   pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC   injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC   therapy). The sequence presented is a rat protein (shown in Table 2 of
CC   the specification) which is differentially expressed during pain. Note:
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic form directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 662 AA;

  Query Match             100.0%;  Score 60;  DB 7;  Length 662;
  Best Local Similarity   100.0%;  Pred. No. 0.068;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 54
AAW41111
ID   AAW41111 standard; protein; 663 AA.
XX
AC   AAW41111;
XX
DT   08-JUN-1998  (first entry)
XX
DE   Chicken matrix metalloproteinase-2.
XX
KW   Matrix metalloproteinase-2; MMP-2; chMMP-2; chicken; Angiogenesis;
KW   inhibitor; antagonist; integrin alpha-v beta-3; vitronectin receptor;
KW   rheumatoid arthritis; tumour; metastasis; diabetic retinopathy;
KW   macular degeneration; restenosis; therapy.
XX
OS   Gallus sp.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Sig_peptide
XX
PN   WO9745137-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009158.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA;
XX
DR   WPI; 1998-032334/03.
DR   N-PSDB; AAV03995.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta3
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Page 163-167; 234pp; English.
XX
CC   This protein sequence comprises chicken matrix metalloproteinase-2 (chMMP
CC   -2). The invention relates to the discovery that angiogenesis is mediated
CC   by the specific vitronectin receptor alpha-v beta-3, and that inhibition
CC   of alpha-v beta-3 function inhibits angiogenesis. Claimed antagonists of
CC   alpha-v beta-3 include C-terminal fragments (see AAW41083-94) of human or
CC   chicken MMP-2. An MMP-2 fragment can be obtained by recombinant DNA
CC   methods, such as PCR amplification of the chMMP-2 coding region, cloning
CC   into e.g. pGEX-3X, and expression in E. coli as a fusion protein with
CC   glutathione-S-transferases. The antagonists can be used to inhibit
```

```
CC   angiogenesis in inflammed tissue (for treatment of arthritis or
CC   rheumatoid arthritis), in solid tumours or metastases (particularly to
CC   induce regression or inhibit tumour growth), and in ocular disorders such
CC   as diabetic retinopathy and macular degeneration, as well as to treat
CC   restenosis (all claimed)
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 55
AAW41227
ID   AAW41227 standard; protein; 663 AA.
XX
AC   AAW41227;
XX
DT   09-JUN-1998  (first entry)
XX
DE   Chicken matrix metalloprotease-2 (MMP-2) protein sequence.
XX
KW   Matrix metalloprotease-2; MMP-2; alpha-v-beta-5 antagonist; treatment;
KW   vitronectin receptor; inhibition; angiogenesis; integrin; tumour growth;
KW   restenosis; neovascularisation.
XX
OS   Gallus sp.
XX
PN   WO9745447-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-US009099.
XX
PR   31-MAY-1996;   96US-0015869P.
PR   31-MAY-1996;   96US-0018733P.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks P,  Cheresh DA,  Friedlander M;
XX
DR   WPI; 1998-041758/04.
XX
PT   Packaging material containing polypeptide antagonist of alphav, beta5
PT   integrin - used for inhibition of angiogenesis, and for treating tumours,
PT   inflammation, eye diseases etc.
XX
PS   Disclosure; Fig 15A-B; 117pp; English.
XX
CC   The present sequence represents the chicken matrix metalloprotease-2 (MMP
CC   -2) protein sequence. Fragments of this protein (AAW41234-39) are able to
CC   act as alpha-v-beta-5 antagonists. Alpha-v-beta-5 is a vitronectin
CC   receptor. Inhibitors of alpha-v-beta-5 can inhibit angiogenesis. The
CC   specification describes a novel labelled package that contains an
CC   inhibitor of angiogenesis i.e. an alpha-v-beta-5 antagonising polypeptide
CC   that binds to integrin alpha-v-beta-5 and includes a part of the C-
CC   terminal domain of MMP. The antagonists are used to inhibit angiogenesis
CC   in inflamed tissue, in solid tumours or metastases, and in a wide range
CC   of ocular disorders (e.g. diabetic or other forms of retinopathy,
CC   neovascular glaucoma, or corneal transplants). They are particularly used
CC   to induce regression or to inhibit growth of tumours. The alpha-v-beta-5
CC   antagonists can also be used to treat restenosis caused by migration of
CC   smooth muscle cells following angioplasty and to reduce blood supply to
CC   selected tissues. The antagonists particularly inhibit neovascularisation
CC   where this is induced by cytokines, e.g. transforming growth factor
CC   alpha, epidermal growth factor or especially vascular endothelial growth
CC   factor
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 60;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 56
ADT05976
ID   ADT05976 standard; protein; 663 AA.
XX
AC   ADT05976;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #1, SEQ ID NO:30.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Asp-Ser-His-Phe in the chicken
FT                   MMP-2 shown in figure 7"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
```

```
DR   WPI; 2004-737508/72.
DR   N-PSDB; ADT05975.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; SEQ ID NO 30; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents chicken matrix metalloprotease 2
CC   (MMP-2, gelatinase) used in an example of the invention. Note: The
CC   present sequence differs between residues 202-205 compared to the
CC   sequence also described as chicken MMP-2 shown in figure 7A-7C
CC   (ADT05995).
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 60;  DB 8;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 57
ADT05995
ID   ADT05995 standard; protein; 663 AA.
XX
AC   ADT05995;
XX
DT   30-DEC-2004  (first entry)
XX
DE   Chicken matrix metalloprotease (MMP-2) version #2.
XX
KW   Angiogenesis inhibitor; integrin alpha-V beta-3 antagonist;
KW   vitronectin receptor antagonist; neovascularisation; cancer; tumour;
KW   inflammation; rheumatoid arthritis; retina; diabetic retinopathy;
KW   restenosis; smooth muscle cell migration; angioplasty; antiangiogenic;
KW   cytostatic; antiinflammatory; antiarthritic; antirheumatic;
KW   ophthalmological; antidiabetic; vasotropic; muscular-gen.;
KW   peptidomimetic; matrix metalloprotease 2; MMP-2; progelatinase; chicken;
KW   enzyme.
XX
OS   Gallus gallus.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .26
FT                   /label= Signal_peptide
FT   Protein         27. .663
FT                   /label= Mature_MMP-2
FT   Misc-difference 202. .205
FT                   /note= "This section is Ser-His-Phe-Asp in the chicken
FT                   MMP-2 shown in SEQ ID NO:30"
FT   Misc-difference 202
FT                   /note= "Encoded by TCC"
FT   Misc-difference 203
FT                   /note= "Encoded by CAT"
FT   Misc-difference 204
FT                   /note= "Encoded by TTT"
FT   Misc-difference 205
FT                   /note= "Encoded by GAT"
FT   Region          436. .663
FT                   /note= "Corresponds to residues 410-637 of the mature
FT                   protein (see SEQ ID NO:23)"
FT   Domain          471. .663
FT                   /label = Hemopexin_domain
FT                   /note = Corresponds to residues 445-637 of the mature
FT                   protein (see also SEQ ID NO:24)
FT   Region          471. .578
FT                   /note= "Corresponds to residues 445-552 of the mature
FT                   protein (see SEQ ID NO:26)"
FT   Region          471. .544
FT                   /note= "Corresponds to residues 445-518 of the mature
FT                   protein (see SEQ ID NO:25)"
FT   Region          542. .663
FT                   /note= "Corresponds to residues 516-637 of the mature
FT                   protein (see SEQ ID NO:27)"
FT   Region          575. .663
FT                   /note= "Corresponds to residues 549-637 of the mature
FT                   protein (see SEQ ID NO:28)"
XX
PN   WO2004087057-A2.
XX
PD   14-OCT-2004.
XX
PF   26-MAR-2004; 2004WO-US009321.
XX
PR   28-MAR-2003; 2003US-00402212.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Brooks PC,  Cheresh DA;
XX
DR   WPI; 2004-737508/72.
DR   N-PSDB; ADT05994.
XX
PT   Administration of composition comprising organic peptidomimetic alpha-v
PT   beta-3 antagonist to e.g. inhibit angiogenesis (inflamed tissue
PT   angiogenesis, retinal angiogenesis and tumor angiogenesis) in a tissue.
XX
PS   Example 2; Fig 7A-C; 184pp; English.
XX
CC   The invention relates to a method of inhibiting angiogenesis in a tissue
CC   by the administration of a composition comprising an organic
CC   peptidomimetic antagonist of integrin alpha-V beta-3 (vitronectin
CC   receptor). The integrin alpha-V beta-3 antagonist and compositions
CC   containing it are useful for inhibiting angiogenesis in a variety of
CC   medical conditions. The antagonist may be used to induce the regression
CC   of solid tumours or solid tumour metastases; to inhibit the growth of
CC   solid tumours undergoing neovascularisation; to treat inflamed tissue in
CC   which neovascularisation is occurring (e.g., in rheumatoid arthritis); to
CC   treat neovascularisation in retinal tissue (e.g., in diabetic
CC   retinopathy); to treat restenosis in a tissue by inhibiting smooth muscle
CC   cell migration (such as that which occurs following angioplasty); and to
CC   reduce the blood supply to a tissue required to support new growth of the
CC   tissue. The present sequence represents chicken matrix metalloprotease 2
CC   (MMP-2, gelatinase) used in an example of the invention. Note: The
CC   present sequence differs between residues 202-205 compared to the
CC   sequence also described as chicken MMP-2 shown in the sequence listing
CC   (ADT05976)
XX
SQ   Sequence 663 AA;

  Query Match             100.0%;  Score 60;  DB 8;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115
```

```
RESULT 58
ADF60554
ID   ADF60554 standard; protein; 708 AA.
XX
AC   ADF60554;
XX
DT   12-FEB-2004  (first entry)
XX
DE   Human contig polypeptide sequence SEQ ID NO:2921.
XX
KW   biological activity; genetic engineering; hybridisation probe; oligomer;
KW   primer; chromosome mapping; gene mapping; recombinant protein production;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO2003080795-A2.
XX
PD   02-OCT-2003.
XX
PF   09-AUG-2002; 2002WO-US025485.
XX
PR   09-AUG-2001; 2001US-0311261P.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Yang Y,  Wang Z,  Weng G,  Ma Y;
XX
DR   WPI; 2003-876918/81.
DR   N-PSDB; ADF60102.
XX
PT   New polynucleotides, useful as hybridization probes, oligomers or
PT   primers, for chromosome or gene mapping, for the recombinant production
PT   of proteins, and for generating antisense DNA or RNA.
XX
PS   Example 3; SEQ ID NO 2921; 571pp; English.
XX
CC   The present invention describes isolated polynucleotide sequences (I),
CC   which encode polypeptides (II) with biological activity. Also described:
CC   (1) a vector comprising (I); (2) an expression vector comprising (I); (3)
CC   a host cell genetically engineered to comprise (I) which is operatively
CC   associated with a regulatory sequence that modulates expression of (I) in
CC   the host cell; (4) a polypeptide (II) encoded by (I); (5) a composition
CC   comprising the polypeptide of (4) and a carrier; (6) an antibody directed
CC   against the polypeptide of (4); (7) detecting (I) or the polypeptide of
CC   (4) in a sample; (8) identifying a compound that binds to the polypeptide
CC   of (4); (9) producing the polypeptide of (4); and (10) a collection of
CC   polynucleotides comprising at least one of the polynucleotide sequences
CC   (I). The polynucleotides (I) can be used as hybridisation probes,
CC   oligomers or primers, for chromosome or gene mapping, for the recombinant
CC   production of proteins, and for generating antisense DNA or RNA. The
CC   present sequence represents a human contig polypeptide sequence, which is
CC   used in an example from the present invention.
XX
SQ   Sequence 708 AA;

  Query Match           100.0%;  Score 60;  DB 7;  Length 708;
  Best Local Similarity  100.0%;  Pred. No. 0.073;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        157 NYNFFPRKPK 166


RESULT 59
AEA20970
ID   AEA20970 standard; protein; 708 AA.
XX
AC   AEA20970;
XX
DT   11-AUG-2005  (first entry)
XX
DE   Novel human polypeptide SEQ ID NO 1664.
XX
KW   vulnerary; CNS-gen.; gene therapy; diagnostic; forensic; mapping;
KW   DNA purification; protein purification; osteoarthritis; antiarthritic;
KW   osteopathic; musculoskeletal disease; osteoporosis; endocrine disease;
KW   periodontal disease; antiinflammatory; mouth disease; burns; injury;
KW   peripheral neuropathy; Alzheimers disease; neuroprotective; nootropic;
KW   degeneration; parkinsons disease; antiparkinsonian; neurological disease;
KW   cerebrovascular ischemia; cerebroprotective; vasotropic;
KW   cardiovascular disease; autoimmune disease; immunosuppressive;
KW   immune disorder; viral infection; virucide; infection; cancer;
KW   cytostatic; neoplasm.
XX
OS   Homo sapiens.
XX
PN   WO2005049806-A2.
XX
PD   02-JUN-2005.
XX
PF   11-MAR-2004; 2004WO-US007412.
XX
PR   14-MAR-2003; 2003US-00389559.
XX
PA   (NUVE-) NUVELO INC.
XX
PI   Tang TY,  Wang J,  Wang ZW,  Zhang J,  Ren F,  Zhou P,  Ma Y;
PI   Ghosh M,  Xue A,  Asundi V,  Zhao Q,  Wang D,  Goodrich R,  Chen R;
PI   Wehrman T,  Weng G,  Boyle B;
XX
DR   WPI; 2005-417730/42.
XX
PT   New polynucleotide encoding a polypeptide with biological activity,
PT   useful for treating a disease or disorder, e.g. osteoarthritis, burns,
PT   CNS and peripheral disease, stroke, autoimmune disorders, viral
PT   infection, or cancer.
XX
PS   Example 3; SEQ ID NO 1664; 500pp; English.
XX
CC   The invention describes a new isolated polynucleotide (I) encoding a
CC   polypeptide with biological activity comprising: a nucleotide sequence of
CC   SEQ ID NOS: 1-567 (fully defined); a nucleotide sequence that hybridizes
CC   to the sequence of (i) under stringent hybridization conditions; or a
CC   nucleotide sequence having greater than 99% sequence identity with the
CC   sequence of (i). Also described are: a(n) (expression)vector comprising
CC   (I); a host cell genetically engineered to comprise (I) operatively,
CC   associated with a regulatory sequence that modulates expression of the
CC   polynucleotide in the host cell; an isolated polypeptide comprising a
CC   sequence of SEQ ID NOS: 568-1134 (fully defined), where the polypeptide
CC   is: a polypeptide encoded by (I); or a polypeptide encoded by a
CC   polynucleotide hybridizing under stringent conditions with any one of SEQ
CC   ID NOS: 1-567; a composition comprising the polypeptide of (3) and a
CC   carrier; an antibody directed against the polypeptide of (3); a method
CC   for detecting (I) in a sample; a method for detecting the polypeptide of
CC   (3) in a sample; a method for identifying a compound that binds to the
CC   polypeptide of (3); a method of producing the polypeptide of (3); and a
CC   collection of polynucleotides, where the collection comprising of at
CC   least one of SEQ ID NOS: 1-567. (I) is a polynucleotide comprising any of
CC   the sequences of SEQ ID NOS: 1-567 encoding a polypeptide with biological
CC   activity, which comprises any of the amino acid sequence of SEQ ID NOS:
CC   568-1134. All sequences are fully defined in the specification. The
CC   sequences and methods are useful in diagnostics, forensic, and gene
CC   mapping, in identifying of mutations responsible for genetic disorders or
CC   other traits, in assessing biodiversity, and for producing many other
CC   types of data and products dependent on DNA and amino acid sequences. The
CC   composition and method are useful for treating a disease or disorder,
CC   e.g. osteoporosis, osteoarthritis, periodontal disease, burns, CNS and
CC   peripheral disease, Alzheimer's disease, Parkinson's disease, stroke,
CC   autoimmune disorders, viral infection, or cancer. This is the amino acid
CC   sequence of a novel polypeptide of the invention.
XX
SQ   Sequence 708 AA;
```

```
  Query Match           100.0%;  Score 60;  DB 9;  Length 708;
  Best Local Similarity  100.0%;  Pred. No. 0.073;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        157 NYNFFPRKPK 166


RESULT 60
ABG23999
ID   ABG23999 standard; protein; 1330 AA.
XX
AC   ABG23999;
XX
DT   18-FEB-2002  (first entry)
XX
DE   Novel human diagnostic protein #23990.
XX
KW   Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW   food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS   Homo sapiens.
XX
PN   WO200175067-A2.
XX
PD   11-OCT-2001.
XX
PF   30-MAR-2001; 2001WO-US008631.
XX
PR   31-MAR-2000; 2000US-00540217.
PR   23-AUG-2000; 2000US-00649167.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Drmanac RT,  Liu C,  Tang YT;
XX
DR   WPI; 2001-639362/73.
DR   N-PSDB; AAS88186.
XX
PT   New isolated polynucleotide and encoded polypeptides, useful in
PT   diagnostics, forensics, gene mapping, identification of mutations
PT   responsible for genetic disorders or other traits and to assess
PT   biodiversity.
XX
PS   Claim 20; SEQ ID NO 54358; 103pp; English.
XX
CC   The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC   sequences. (I) is useful as hybridisation probes, polymerase chain
CC   reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC   and in recombinant production of (II). The polynucleotides are also used
CC   in diagnostics as expressed sequence tags for identifying expressed
CC   genes. (I) is useful in gene therapy techniques to restore normal
CC   activity of (II) or to treat disease states involving (II). (II) is
CC   useful for generating antibodies against it, detecting or quantitating a
CC   polypeptide in tissue, as molecular weight markers and as a food
CC   supplement. (II) and its binding partners are useful in medical imaging
CC   of sites expressing (II). (I) and (II) are useful for treating disorders
CC   involving aberrant protein expression or biological activity. The
CC   polypeptide and polynucleotide sequences have applications in
CC   diagnostics, forensics, gene mapping, identification of mutations
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC   amino acid sequences of the invention. Note: The sequence data for this
CC   patent did not appear in the printed specification, but was obtained in
CC   electronic format directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 1330 AA;

  Query Match           100.0%;  Score 60;  DB 4;  Length 1330;
  Best Local Similarity  100.0%;  Pred. No. 0.14;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        327 NYNFFPRKPK 336


Search completed: February 21, 2006, 18:13:22
Job time : 102.386 secs
```

APP
of Addn's

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:00:29 ; Search time 22.8947 Seconds
(without alignments)
36.111 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	10	2	US-10-153-185-13	Sequence 13, Appl
2	60	100.0	19	2	US-10-153-185-11	Sequence 11, Appl
3	60	100.0	43	2	US-10-153-185-15	Sequence 15, Appl
4	60	100.0	44	2	US-10-153-185-2	Sequence 2, Appli
5	60	100.0	631	2	US-08-448-489-17	Sequence 17, Appl
6	60	100.0	631	2	US-09-689-730-17	Sequence 17, Appl
7	60	100.0	660	2	US-08-704-711A-18	Sequence 18, Appl
8	60	100.0	660	2	US-09-521-220-18	Sequence 18, Appl
9	60	100.0	660	2	US-09-391-104-19	Sequence 19, Appl
10	60	100.0	660	2	US-09-917-254-89	Sequence 89, Appl
11	60	100.0	660	2	US-09-949-016-6512	Sequence 6512, Ap
12	60	100.0	660	2	US-09-949-016-7937	Sequence 7937, Ap
13	60	100.0	660	2	US-10-153-185-14	Sequence 14, Appl
14	60	100.0	663	2	US-09-194-468A-30	Sequence 30, Appl
15	55	91.7	30	1	US-08-303-270-6	Sequence 6, Appli
16	55	91.7	171	1	US-08-303-270-1	Sequence 1, Appli
17	54	90.0	168	2	US-08-444-628-9	Sequence 9, Appli
18	54	90.0	168	2	US-08-357-820-9	Sequence 9, Appli
19	45	75.0	136	2	US-09-513-999C-4639	Sequence 4639, Ap
20	39	65.0	473	2	US-09-949-016-9481	Sequence 9481, Ap
21	39	65.0	518	2	US-09-538-092-579	Sequence 579, App
22	38	63.3	438	1	US-07-923-095-2	Sequence 2, Appli
23	38	63.3	438	1	US-08-229-511-2	Sequence 2, Appli
24	38	63.3	438	1	US-08-314-979-2	Sequence 2, Appli
25	38	63.3	438	1	US-08-436-716-2	Sequence 2, Appli
26	38	63.3	456	2	US-09-949-016-10421	Sequence 10421, A
27	38	63.3	572	2	US-09-328-352-4176	Sequence 4176, Ap
28	37	61.7	105	2	US-09-248-796A-17001	Sequence 17001, A
29	37	61.7	198	2	US-09-710-279-1572	Sequence 1572, Ap
30	37	61.7	248	2	US-09-134-001C-3731	Sequence 3731, Ap
31	37	61.7	249	2	US-09-701-868-13	Sequence 13, Appl
32	37	61.7	307	2	US-09-252-991A-26413	Sequence 26413, A
33	37	61.7	503	2	US-09-323-998E-61	Sequence 61, Appl
34	37	61.7	576	2	US-10-197-220-73	Sequence 73, Appl
35	37	61.7	590	2	US-09-198-452A-82	Sequence 82, Appl
36	37	61.7	590	2	US-09-438-185A-67	Sequence 67, Appl
37	36	60.0	312	2	US-09-543-681A-6183	Sequence 6183, Ap
38	36	60.0	335	1	US-08-379-556A-10	Sequence 10, Appl
39	36	60.0	343	2	US-09-454-034-8	Sequence 8, Appli
40	36	60.0	357	2	US-09-489-039A-10505	Sequence 10505, A
41	36	60.0	536	2	US-09-270-767-34532	Sequence 34532, A
42	36	60.0	536	2	US-09-270-767-49749	Sequence 49749, A
43	36	60.0	669	2	US-09-252-991A-31488	Sequence 31488, A
44	36	60.0	745	2	US-09-270-767-45481	Sequence 45481, A
45	36	60.0	1360	2	US-09-788-657-22	Sequence 22, Appl

ALIGNMENTS

```
RESULT 1
US-10-153-185-13
; Sequence 13, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-13

  Query Match             100.0%;  Score 60;  DB 2;  Length 10;
  Best Local Similarity   100.0%;  Pred. No. 0.00035;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 2
US-10-153-185-11
; Sequence 11, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
```

; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-11

  Query Match 100.0%; Score 60; DB 2; Length 19;
  Best Local Similarity 100.0%; Pred. No. 0.00067;
  Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
      ||||||||||
Db 10 NYNFFPRKPK 19

RESULT 3
US-10-153-185-15
; Sequence 15, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 43
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-15

  Query Match 100.0%; Score 60; DB 2; Length 43;
  Best Local Similarity 100.0%; Pred. No. 0.0015;
  Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
      ||||||||||
Db 33 NYNFFPRKPK 42

RESULT 4
US-10-153-185-2
; Sequence 2, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 44
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match 100.0%; Score 60; DB 2; Length 44;
  Best Local Similarity 100.0%; Pred. No. 0.0015;
  Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
      ||||||||||
Db 33 NYNFFPRKPK 42

RESULT 5
US-08-448-489-17
; Sequence 17, Application US/08448489
; Patent No. 6184022
; GENERAL INFORMATION:
; APPLICANT: SEIKI, Motoharu
; APPLICANT: SATO, Hiroshi
; APPLICANT: SHINAGAWA, Akira
; TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
; FILE REFERENCE: 55-290P
; CURRENT APPLICATION NUMBER: US/08/448,489
; CURRENT FILING DATE: 1995-06-07
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
; LENGTH: 631
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Known Member of
; OTHER INFORMATION: Matrix Metalloproteinase Family
US-08-448-489-17

  Query Match 100.0%; Score 60; DB 2; Length 631;
  Best Local Similarity 100.0%; Pred. No. 0.022;
  Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
      ||||||||||
Db 80 NYNFFPRKPK 89

RESULT 6
US-09-689-730-17
; Sequence 17, Application US/09689730
; Patent No. 6825024
; GENERAL INFORMATION:
; APPLICANT: SEIKI, Motoharu
; APPLICANT: SATO, Hiroshi
; APPLICANT: SHINAGAWA, Akira
; TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
; FILE REFERENCE: 55-290P
; CURRENT APPLICATION NUMBER: US/09/689,730
; CURRENT FILING DATE: 2000-10-13
; PRIOR APPLICATION NUMBER: US/08/448,489
; PRIOR FILING DATE: 1995-06-07
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 17
; LENGTH: 631
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Known Member of
; OTHER INFORMATION: Matrix Metalloproteinase Family
US-09-689-730-17

  Query Match 100.0%; Score 60; DB 2; Length 631;
  Best Local Similarity 100.0%; Pred. No. 0.022;
  Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
      ||||||||||
Db 80 NYNFFPRKPK 89

RESULT 7
US-08-704-711A-18

```
; Sequence 18, Application US/08704711A
; Patent No. 6114159
;  GENERAL INFORMATION:
;    APPLICANT:  WILL, Horst
;    APPLICANT:  HINZMANN, Bernd
;    TITLE OF INVENTION:  DNA SEQUENCES FOR MATRIX
;    TITLE OF INVENTION:  METALLOPROTEASES, THEIR PRODUCTION AND USE
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Foley & Lardner
;      STREET:  3000 K Street, N.W., Suite 500
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20007-5109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/704,711A
;      FILING DATE:  20-NOV-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  WO PCT/DE95/00357
;      FILING DATE:  17-MAR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  DE 4438838.1
;      FILING DATE:  21-OCT-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  DE 4409663.1
;      FILING DATE:  17-MAR-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GRANADOS, Patricia D.
;      REGISTRATION NUMBER:  33,683
;      REFERENCE/DOCKET NUMBER:  26083/124
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (202)672-5300
;      TELEFAX:  (202)672-5399
;      TELEX:  904136
;  INFORMATION FOR SEQ ID NO:  18:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  660 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-704-711A-18

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 8
US-09-521-220-18
; Sequence 18, Application US/09521220
; Patent No. 6399348
;   GENERAL INFORMATION:
;        APPLICANT: WILL, Horst
;                   HINZMANN, Bernd
;        TITLE OF INVENTION: DNA SEQUENCES FOR MATRIX
;                            METALLOPROTEASES, THEIR PRODUCTION AND USE
;        NUMBER OF SEQUENCES: 22
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Foley & Lardner
;             STREET: 3000 K Street, N.W., Suite 500
;             CITY: Washington
;             STATE: D.C.
;             COUNTRY: USA
;             ZIP: 20007-5109
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/521,220
;             FILING DATE: 08-Mar-2000
;             CLASSIFICATION: <Unknown>
;                             21-OCT-1994
;                             17-MAR-1994
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/704,711
;             FILING DATE: <Unknown>
;             APPLICATION NUMBER: DE 4438838.1
;             FILING DATE: 21-OCT-1994
;             APPLICATION NUMBER: DE 4409663.1
;             FILING DATE: 17-MAR-1994
;        ATTORNEY/AGENT INFORMATION:
;             NAME: GRANADOS, Patricia D.
;             REGISTRATION NUMBER: 33,683
;             REFERENCE/DOCKET NUMBER: 26083/124
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (202)672-5300
;             TELEFAX: (202)672-5399
;             TELEX: 904136
;   INFORMATION FOR SEQ ID NO: 18:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 660 amino acids
;             TYPE: amino acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-521-220-18

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 9
US-09-391-104-19
; Sequence 19, Application US/09391104
; Patent No. 6399371
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
```

```
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 10
US-09-917-254-89
; Sequence 89, Application US/09917254
; Patent No. 6703204
; GENERAL INFORMATION:
;  APPLICANT: Mutter, George
;  APPLICANT:  Baak, Jan
;  TITLE OF INVENTION: Prognostic Classification of Breast Cancer
;  FILE REFERENCE: B0801/7224(JRV)
;  CURRENT APPLICATION NUMBER: US/09/917,254
;  CURRENT FILING DATE:  2001-07-27
;  PRIOR APPLICATION NUMBER: US 60/222,093
;  PRIOR FILING DATE: 2000-07-28
;  NUMBER OF SEQ ID NOS: 102
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 89
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-09-917-254-89

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 11
US-09-949-016-6512
; Sequence 6512, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6512
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-6512

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 12
US-09-949-016-7937
; Sequence 7937, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7937
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-7937

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 13
US-10-153-185-14
; Sequence 14, Application US/10153185
; Patent No. 6906036
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match             100.0%;  Score 60;  DB 2;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 14
US-09-194-468A-30
; Sequence 30, Application US/09194468A
; Patent No. 6500924
; GENERAL INFORMATION:
;  APPLICANT:  Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION:  METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
```

```
;  FILE REFERENCE:  MER0049S
;  CURRENT APPLICATION NUMBER: US/09/194,468A
;  CURRENT FILING DATE:  1999-03-23
;  PRIOR APPLICATION NUMBER:  60/018,773
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  60/015,896
;  PRIOR FILING DATE:  1996-05-31
;  PRIOR APPLICATION NUMBER:  PCT/US97/09158
;  PRIOR FILING DATE:  1997-05-30
;  NUMBER OF SEQ ID NOS:  45
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-09-194-468A-30

  Query Match             100.0%;  Score 60;  DB 2;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.023;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 15
US-08-303-270-6
; Sequence 6, Application US/08303270
; Patent No. 5646027
;  GENERAL INFORMATION:
;    APPLICANT:  Ye, Qi-Zhuang
;    APPLICANT:  Johnson, Linda L.
;    APPLICANT:  Hupe, Donald J.
;    TITLE OF INVENTION:  Process for the Production of
;    TITLE OF INVENTION:  Gelatinase Catalytic Domain Protein
;    NUMBER OF SEQUENCES:  10
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Warner-Lambert Company
;      STREET:  2800 Plymouth Rd.
;      CITY:  Ann Arbor
;      STATE:  MI
;      COUNTRY:  US
;      ZIP:  48105
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/303,270
;      FILING DATE:
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Tinney, Francis J.
;      REGISTRATION NUMBER:  33,069
;      REFERENCE/DOCKET NUMBER:  5120-FJT
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  313 996-7295
;      TELEFAX:  313 996-1553
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  30 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-303-270-6

  Query Match             91.7%;  Score 55;  DB 1;  Length 30;
  Best Local Similarity   90.0%;  Pred. No. 0.0076;
  Matches    9;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              :|||||||||
Db          2 SYNFFPRKPK 11


Search completed: February 21, 2006, 08:02:41
Job time : 23.8947 secs
```

This Page Blank (uspto)

GenCore version 5.1.7

OM protein - protein search, using sw model

Run on: February 21, 2006, 18:13:46 ; Search time 76.8421 Seconds
(without alignments)
54.375 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 55

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 500 summaries

Database : Published_Applications_AA_Main:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	10	4	US-10-219-329-13	Sequence 13, Appl
2	60	100.0	10	4	US-10-153-185-13	Sequence 13, Appl
3	60	100.0	10	4	US-10-219-561-13	Sequence 13, Appl
4	60	100.0	10	4	US-10-032-376A-13	Sequence 13, Appl
5	60	100.0	10	4	US-10-335-207-13	Sequence 13, Appl
6	60	100.0	10	5	US-10-601-059-13	Sequence 13, Appl
7	60	100.0	10	6	US-11-031-488-13	Sequence 13, Appl
8	60	100.0	19	4	US-10-219-329-11	Sequence 11, Appl
9	60	100.0	19	4	US-10-153-185-11	Sequence 11, Appl
10	60	100.0	19	4	US-10-219-561-11	Sequence 11, Appl
11	60	100.0	19	4	US-10-032-376A-11	Sequence 11, Appl
12	60	100.0	19	4	US-10-335-207-11	Sequence 11, Appl
13	60	100.0	19	5	US-10-601-059-11	Sequence 11, Appl
14	60	100.0	19	6	US-11-031-488-11	Sequence 11, Appl
15	60	100.0	43	4	US-10-219-329-15	Sequence 15, Appl
16	60	100.0	43	4	US-10-153-185-15	Sequence 15, Appl
17	60	100.0	43	4	US-10-219-561-15	Sequence 15, Appl
18	60	100.0	43	4	US-10-032-376A-15	Sequence 15, Appl
19	60	100.0	43	4	US-10-335-207-15	Sequence 15, Appl
20	60	100.0	43	5	US-10-601-059-15	Sequence 15, Appl
21	60	100.0	43	6	US-11-031-488-15	Sequence 15, Appl
22	60	100.0	44	4	US-10-219-329-2	Sequence 2, Appli
23	60	100.0	44	4	US-10-153-185-2	Sequence 2, Appli
24	60	100.0	44	4	US-10-219-561-2	Sequence 2, Appli
25	60	100.0	44	4	US-10-032-376A-2	Sequence 2, Appli
26	60	100.0	44	4	US-10-335-207-2	Sequence 2, Appli
27	60	100.0	44	5	US-10-601-059-2	Sequence 2, Appli
28	60	100.0	44	6	US-11-031-488-2	Sequence 2, Appli
29	60	100.0	75	3	US-09-864-761-37964	Sequence 37964, A
30	60	100.0	462	5	US-10-852-707-56	Sequence 56, Appl
31	60	100.0	468	5	US-10-450-763-54360	Sequence 54360, A
32	60	100.0	660	3	US-09-391-104-19	Sequence 19, Appl
33	60	100.0	660	3	US-09-801-196-35	Sequence 35, Appl
34	60	100.0	660	3	US-09-918-715-208	Sequence 208, App
35	60	100.0	660	4	US-10-219-329-14	Sequence 14, Appl
36	60	100.0	660	4	US-10-301-822-125	Sequence 125, App
37	60	100.0	660	4	US-10-153-185-14	Sequence 14, Appl
38	60	100.0	660	4	US-10-219-561-14	Sequence 14, Appl
39	60	100.0	660	4	US-10-131-985-25	Sequence 25, Appl
40	60	100.0	660	4	US-10-447-315-3	Sequence 3, Appli
41	60	100.0	660	4	US-10-032-376A-14	Sequence 14, Appl
42	60	100.0	660	4	US-10-335-207-14	Sequence 14, Appl
43	60	100.0	660	4	US-10-480-621-1	Sequence 1, Appli
44	60	100.0	660	4	US-10-474-794-208	Sequence 208, App
45	60	100.0	660	5	US-10-601-059-14	Sequence 14, Appl
46	60	100.0	660	5	US-10-872-198-131	Sequence 131, App
47	60	100.0	660	5	US-10-901-417-25	Sequence 25, Appl
48	60	100.0	660	5	US-10-979-159-208	Sequence 208, App
49	60	100.0	660	5	US-10-287-436A-489	Sequence 489, App
50	60	100.0	660	5	US-10-287-436A-1185	Sequence 1185, Ap
51	60	100.0	660	6	US-11-021-951-131	Sequence 131, App
52	60	100.0	660	6	US-11-031-488-14	Sequence 14, Appl
53	60	100.0	663	4	US-10-115-223-30	Sequence 30, Appl
54	60	100.0	663	4	US-10-402-212-30	Sequence 30, Appl
55	60	100.0	1330	5	US-10-450-763-54358	Sequence 54358, A

ALIGNMENTS

RESULT 1
US-10-219-329-13
; Sequence 13, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Weart, Ilona f.
; TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
; FILE REFERENCE: 1443.035WO1
; CURRENT APPLICATION NUMBER: US/10/219,329
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-329-13

Query Match 100.0%; Score 60; DB 4; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0037;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 1 NYNFFPRKPK 10

RESULT 2
US-10-153-185-13
; Sequence 13, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds

```
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-13

  Query Match             100.0%;  Score 60;  DB 4;  Length 10;
  Best Local Similarity   100.0%;  Pred. No. 0.0037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 3
US-10-219-561-13
; Sequence 13, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-13

  Query Match             100.0%;  Score 60;  DB 4;  Length 10;
  Best Local Similarity   100.0%;  Pred. No. 0.0037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 4
US-10-032-376A-13
; Sequence 13, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-13

  Query Match             100.0%;  Score 60;  DB 4;  Length 10;
  Best Local Similarity   100.0%;  Pred. No. 0.0037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 5
US-10-335-207-13
; Sequence 13, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-13

  Query Match             100.0%;  Score 60;  DB 4;  Length 10;
  Best Local Similarity   100.0%;  Pred. No. 0.0037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db          1 NYNFFPRKPK 10


RESULT 6
US-10-601-059-13
; Sequence 13, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 10
;   TYPE: PRT
;   ORGANISM: Homo sapiens
```

US-10-601-059-13

Query Match 100.0%; Score 60; DB 5; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0037;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 1 NYNFFPRKPK 10

RESULT 7
US-11-031-488-13
; Sequence 13, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/11/031,488
; CURRENT FILING DATE: 2005-01-07
; PRIOR APPLICATION NUMBER: US/10/153,185
; PRIOR FILING DATE: 2002-05-21
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-031-488-13

Query Match 100.0%; Score 60; DB 6; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0037;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 1 NYNFFPRKPK 10

RESULT 8
US-10-219-329-11
; Sequence 11, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Weart, Ilona f.
; TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
; FILE REFERENCE: 1443.035WO1
; CURRENT APPLICATION NUMBER: US/10/219,329
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-329-11

Query Match 100.0%; Score 60; DB 4; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0069;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 9
US-10-153-185-11
; Sequence 11, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.034US1
; CURRENT APPLICATION NUMBER: US/10/153,185
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-153-185-11

Query Match 100.0%; Score 60; DB 4; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0069;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 10
US-10-219-561-11
; Sequence 11, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
; APPLICANT: Quirk, Stephen
; APPLICANT: Malik, Sohail
; APPLICANT: Villanueva, Julie M.
; TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
; FILE REFERENCE: 1443.008US2
; CURRENT APPLICATION NUMBER: US/10/219,561
; CURRENT FILING DATE: 2002-08-15
; PRIOR APPLICATION NUMBER: US 10/032,376
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: US 10/153,185
; PRIOR FILING DATE: 2002-05-21
; PRIOR APPLICATION NUMBER: US 60/312,726
; PRIOR FILING DATE: 2001-08-16
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 19
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-219-561-11

Query Match 100.0%; Score 60; DB 4; Length 19;
Best Local Similarity 100.0%; Pred. No. 0.0069;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NYNFFPRKPK 10
||||||||||
Db 10 NYNFFPRKPK 19

RESULT 11
US-10-032-376A-11

```
; Sequence 11, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-11

  Query Match             100.0%;  Score 60;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.0069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         10 NYNFFPRKPK 19


RESULT 12
US-10-335-207-11
; Sequence 11, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-11

  Query Match             100.0%;  Score 60;  DB 4;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.0069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         10 NYNFFPRKPK 19


RESULT 13
US-10-601-059-11
; Sequence 11, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-11

  Query Match             100.0%;  Score 60;  DB 5;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.0069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         10 NYNFFPRKPK 19


RESULT 14
US-11-031-488-11
; Sequence 11, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 19
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-11

  Query Match             100.0%;  Score 60;  DB 6;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 0.0069;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         10 NYNFFPRKPK 19


RESULT 15
US-10-219-329-15
; Sequence 15, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
```

```
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-15

  Query Match             100.0%;  Score 60;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 16
US-10-153-185-15
; Sequence 15, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-15

  Query Match             100.0%;  Score 60;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 17
US-10-219-561-15
; Sequence 15, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-15

  Query Match             100.0%;  Score 60;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 18
US-10-032-376A-15
; Sequence 15, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-15

  Query Match             100.0%;  Score 60;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 19
US-10-335-207-15
; Sequence 15, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-15

  Query Match             100.0%;  Score 60;  DB 4;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 20
US-10-601-059-15
; Sequence 15, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
```

```
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-15

  Query Match             100.0%;  Score 60;  DB 5;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 21
US-11-031-488-15
; Sequence 15, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 43
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-15

  Query Match             100.0%;  Score 60;  DB 6;  Length 43;
  Best Local Similarity   100.0%;  Pred. No. 0.015;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 22
US-10-219-329-2
; Sequence 2, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-2

  Query Match             100.0%;  Score 60;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 23
US-10-153-185-2
; Sequence 2, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-2

  Query Match             100.0%;  Score 60;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 24
US-10-219-561-2
; Sequence 2, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
```

```
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-2

  Query Match             100.0%;  Score 60;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 25
US-10-032-376A-2
; Sequence 2, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-2

  Query Match             100.0%;  Score 60;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 26
US-10-335-207-2
; Sequence 2, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-2

  Query Match             100.0%;  Score 60;  DB 4;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 27
US-10-601-059-2
; Sequence 2, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-2

  Query Match             100.0%;  Score 60;  DB 5;  Length 44;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 28
US-11-031-488-2
; Sequence 2, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
;   LENGTH: 44
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-2

  Query Match             100.0%;  Score 60;  DB 6;  Length 44;
```

```
  Best Local Similarity   100.0%;  Pred. No. 0.016;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         33 NYNFFPRKPK 42


RESULT 29
US-09-864-761-37964
; Sequence 37964, Application US/09864761
; Patent No. US20020048763A1
; GENERAL INFORMATION:
;  APPLICANT: Penn, Sharron G.
;  APPLICANT:  Rank, David R.
;  APPLICANT:  Hanzel, David K.
;  APPLICANT:  Chen, Wensheng
;  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
;  TITLE OF INVENTION:  GENE EXPRESSION ANALYSIS BY MICROARRAY
;  FILE REFERENCE: Aeomica-X-1
;  CURRENT APPLICATION NUMBER: US/09/864,761
;  CURRENT FILING DATE:  2001-05-23
;  PRIOR APPLICATION NUMBER: US 60/180,312
;  PRIOR FILING DATE: 2000-02-04
;  PRIOR APPLICATION NUMBER: US 60/207,456
;  PRIOR FILING DATE: 2000-05-26
;  PRIOR APPLICATION NUMBER: US 09/632,366
;  PRIOR FILING DATE: 2000-08-03
;  PRIOR APPLICATION NUMBER: GB 24263.6
;  PRIOR FILING DATE: 2000-10-04
;  PRIOR APPLICATION NUMBER: US 60/236,359
;  PRIOR FILING DATE: 2000-09-27
;  PRIOR APPLICATION NUMBER: PCT/US01/00666
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00667
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00664
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00669
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00665
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00668
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00663
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00662
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00661
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: PCT/US01/00670
;  PRIOR FILING DATE: 2001-01-30
;  PRIOR APPLICATION NUMBER: US 60/234,687
;  PRIOR FILING DATE: 2000-09-21
;  PRIOR APPLICATION NUMBER: US 09/608,408
;  PRIOR FILING DATE: 2000-06-30
;  PRIOR APPLICATION NUMBER: US 09/774,203
;  PRIOR FILING DATE: 2001-01-29
;  NUMBER OF SEQ ID NOS: 49117
;  SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 37964
;   LENGTH: 75
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: MAP TO AC007336.2
;   OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1.1
;   OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5
;   OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL =   2
;   OTHER INFORMATION: EST_HUMAN HIT: AI752577.1, EVALUE 1.00e-41
;   OTHER INFORMATION: SWISSPROT HIT: P33436, EVALUE 1.00e-42
US-09-864-761-37964

  Query Match             100.0%;  Score 60;  DB 3;  Length 75;
  Best Local Similarity   100.0%;  Pred. No. 0.026;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         58 NYNFFPRKPK 67


RESULT 30
US-10-852-707-56
; Sequence 56, Application US/10852707
; Publication No. US20050142572A1
; GENERAL INFORMATION:
;  APPLICANT: Macina, Roberto
;  APPLICANT:  Turner, Leah
;  APPLICANT:  Sun, Yongming
;  TITLE OF INVENTION: Compositions, Splice Variants and Methods Relating to Lung Specif
;  TITLE OF INVENTION:  Nucleic Acids and Proteins
;  FILE REFERENCE: DEX-0486
;  CURRENT APPLICATION NUMBER: US/10/852,707
;  CURRENT FILING DATE:  2004-05-24
;  PRIOR APPLICATION NUMBER: US 60/473,941
;  PRIOR FILING DATE: 2003-05-22
;  NUMBER OF SEQ ID NOS: 138
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 56
;   LENGTH: 462
;   TYPE: PRT
;   ORGANISM: Homo sapien
US-10-852-707-56

  Query Match             100.0%;  Score 60;  DB 5;  Length 462;
  Best Local Similarity   100.0%;  Pred. No. 0.15;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 31
US-10-450-763-54360
; Sequence 54360, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54360
;   LENGTH: 468
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (221)..(258)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (167)..(264)
;   OTHER INFORMATION: Fibronectin type II domain identified by PFam, accession name
```

```
;   OTHER INFORMATION: fn2, E-value=4.4e-55, PFam score of 147.1
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)...(468)
;   OTHER INFORMATION: Xaa = X or * as defined in Table 2
US-10-450-763-54360

  Query Match           100.0%;  Score 60;  DB 5;  Length 468;
  Best Local Similarity  100.0%;  Pred. No. 0.15;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db         95 NYNFFPRKPK 104


RESULT 32
US-09-391-104-19
; Sequence 19, Application US/09391104
; Publication No. US20020031817A1
; GENERAL INFORMATION:
;  APPLICANT:  Abbott Laboratories
;  APPLICANT:  Falduto, Michael T.
;  APPLICANT:  Magnuson, Scott R.
;  APPLICANT:  Morgan, Douglas W.
;  TITLE OF INVENTION:  HUMAN MATRIX METALLOPROTEASE GENE,
;  TITLE OF INVENTION:  PROTEINS ENCODED THEREFROM AND METHODS
;  TITLE OF INVENTION:  OF USING SAME
;  FILE REFERENCE:  6073.US.P1
;  CURRENT APPLICATION NUMBER: US/09/391,104
;  CURRENT FILING DATE:  1999-09-07
;  PRIOR APPLICATION NUMBER:  US 08/814,394
;  PRIOR FILING DATE:  1997-03-11
;  NUMBER OF SEQ ID NOS:  35
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 19
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-391-104-19

  Query Match           100.0%;  Score 60;  DB 3;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 33
US-09-801-196-35
; Sequence 35, Application US/09801196
; Patent No. US20020037827A1
; GENERAL INFORMATION:
;  APPLICANT:  Wang, Kai
;  APPLICANT:  Smith, Ryan
;  APPLICANT:  Fajardo, Mark
;  APPLICANT:  Moss, Patrick
;  TITLE OF INVENTION:  A NOVEL MATRIX METALLOPROTEINASE (MMP-25)
;  TITLE OF INVENTION:  EXPRESSED IN SKIN CELLS
;  FILE REFERENCE:  240083.509
;  CURRENT APPLICATION NUMBER: US/09/801,196
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  37
;  SOFTWARE:  FastSEQ for Windows Version 4.0
; SEQ ID NO 35
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-801-196-35

  Query Match           100.0%;  Score 60;  DB 3;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 34
US-09-918-715-208
; Sequence 208, Application US/09918715
; Publication No. US20030017157A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/09/918,715
;  CURRENT FILING DATE:  2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-918-715-208

  Query Match           100.0%;  Score 60;  DB 3;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 35
US-10-219-329-14
; Sequence 14, Application US/10219329
; Publication No. US20030096757A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Weart, Ilona f.
;  TITLE OF INVENTION: Anti-Cancer and Wound Healing Compounds
;  FILE REFERENCE: 1443.035WO1
;  CURRENT APPLICATION NUMBER: US/10/219,329
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 23
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-329-14

  Query Match           100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity  100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118
```

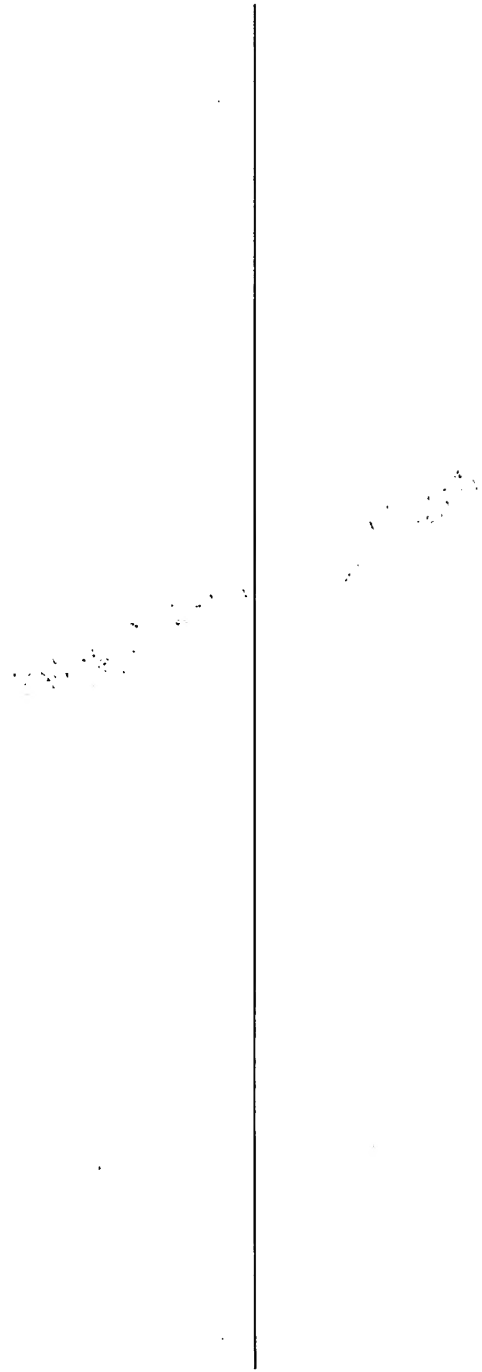
```
RESULT 36
US-10-301-822-125
; Sequence 125, Application US/10301822
; Publication No. US20030148410A1
; GENERAL INFORMATION:
;  APPLICANT: Millennium Pharmaceuticals, Inc.
;  APPLICANT:  Berger, Allison
;  APPLICANT:  Guillemette, Tracy L.
;  APPLICANT:  Kamatkar, Shubhangi
;  APPLICANT:  Schlegel, Robert
;  APPLICANT:  Monahan, John E.
;  APPLICANT:  Thibodeau, Stephen N.
;  APPLICANT:  Burgart, Lawrence J.
;  TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
;  TITLE OF INVENTION:  METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
;  TITLE OF INVENTION:  THERAPY OF COLON CANCER
;  FILE REFERENCE: MPM01-029P2RNM
;  CURRENT APPLICATION NUMBER: US/10/301,822
;  CURRENT FILING DATE:  2002-11-21
;  PRIOR APPLICATION NUMBER: US 60/339,971
;  PRIOR FILING DATE: 2001-12-10
;  PRIOR APPLICATION NUMBER: US 60/361,978
;  PRIOR FILING DATE: 2002-03-05
;  PRIOR APPLICATION NUMBER: US 60/381,988
;  PRIOR FILING DATE: 2002-05-20
;  NUMBER OF SEQ ID NOS: 228
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
US-10-301-822-125

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 37
US-10-153-185-14
; Sequence 14, Application US/10153185
; Publication No. US20030148959A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/10/153,185
;  CURRENT FILING DATE:  2002-08-13
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-153-185-14

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 38
US-10-219-561-14
; Sequence 14, Application US/10219561
; Publication No. US20030166567A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  APPLICANT:  Villanueva, Julie M.
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.008US2
;  CURRENT APPLICATION NUMBER: US/10/219,561
;  CURRENT FILING DATE:  2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-219-561-14

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 39
US-10-131-985-25
; Sequence 25, Application US/10131985
; Publication No. US20030199440A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/131,985
;  CURRENT FILING DATE:  2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-131-985-25

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118
```

```
RESULT 40
US-10-447-315-3
; Sequence 3, Application US/10447315
; Publication No. US20040071687A1
; GENERAL INFORMATION:
;  APPLICANT: Rafii, Shahin
;  APPLICANT:  Heissig, Beate
;  APPLICANT:  Hattori, Koichi
;  APPLICANT:  Cornell Research Foundation, Inc.
;  TITLE OF INVENTION: Adult Stem Cell Recruitment
;  FILE REFERENCE: 1676.006US1
;  CURRENT APPLICATION NUMBER: US/10/447,315
;  CURRENT FILING DATE:  2003-05-28
;  PRIOR APPLICATION NUMBER: US 60/383,658
;  PRIOR FILING DATE: 2002-05-28
;  NUMBER OF SEQ ID NOS: 28
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-447-315-3

  Query Match           100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 41
US-10-032-376A-14
; Sequence 14, Application US/10032376A
; Publication No. US20040127420A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Steven
;  TITLE OF INVENTION: Metalloproteinase Inhibitors for Wound Healing
;  FILE REFERENCE: 1443.008US1
;  CURRENT APPLICATION NUMBER: US/10/032,376A
;  CURRENT FILING DATE:  2001-12-21
;  PRIOR APPLICATION NUMBER: 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-032-376A-14

  Query Match           100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 42
US-10-335-207-14
; Sequence 14, Application US/10335207
; Publication No. US20040127421A1
; GENERAL INFORMATION:
;  APPLICANT: Malik, Sohail
;  APPLICANT:  Quirk, Stephen
;  TITLE OF INVENTION: Method to Increase Fibronectin
;  FILE REFERENCE: 1443.047US1
;  CURRENT APPLICATION NUMBER: US/10/335,207
;  CURRENT FILING DATE:  2002-12-30
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-335-207-14

  Query Match           100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 43
US-10-480-621-1
; Sequence 1, Application US/10480621
; Publication No. US20040175817A1
; GENERAL INFORMATION:
;  APPLICANT: Jepson, Holly
;  APPLICANT:  Minshull, Claire
;  APPLICANT:  Pauptit, Richard
;  APPLICANT:  Rowsell, Sian
;  TITLE OF INVENTION: A CRYSTALLISED CATALYTIC DOMAIN OF MATRIX
;  TITLE OF INVENTION:  METALLOPROTEINASE 9 (MMP9) AND THE USE OF
;  TITLE OF INVENTION:  ITS THREE DIMENSIONAL STRUCTURE TO DESIGN
;  TITLE OF INVENTION:  MMP9 MODULATORS
;  FILE REFERENCE: 06275-377US1
;  CURRENT APPLICATION NUMBER: US/10/480,621
;  CURRENT FILING DATE:  2003-12-12
;  PRIOR APPLICATION NUMBER: PCT/SE02/01266
;  PRIOR FILING DATE: 2002-06-24
;  PRIOR APPLICATION NUMBER: SE 0102298-7
;  PRIOR FILING DATE: 2001-06-27
;  NUMBER OF SEQ ID NOS: 2
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-480-621-1

  Query Match           100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 44
US-10-474-794-208
; Sequence 208, Application US/10474794
; Publication No. US20040213793A1
; GENERAL INFORMATION:
;  APPLICANT: Carson-Walter, Eleanor
;  APPLICANT:  St. Croix, Brad
;  APPLICANT:  Vogelstein, Bert
;  APPLICANT:  Kinzler, Kenneth
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
;  FILE REFERENCE: 1107.00179
;  CURRENT APPLICATION NUMBER: US/10/474,794
;  CURRENT FILING DATE:  2003-10-14
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2001-04-11
;  PRIOR APPLICATION NUMBER: 60/308,829
;  PRIOR FILING DATE: 2001-08-01
;  NUMBER OF SEQ ID NOS: 359
;  SOFTWARE: FastSEQ for Windows Version 4.0
```

```
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-474-794-208

  Query Match             100.0%;  Score 60;  DB 4;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 45
US-10-601-059-14
; Sequence 14, Application US/10601059
; Publication No. US20040259802A1
; GENERAL INFORMATION:
;  APPLICANT: Yang, Shu-Ping
;  APPLICANT:  Quirk, Stephen
;  APPLICANT:  Kimberly-Clark Worldwide, Inc.
;  TITLE OF INVENTION: Anti-Chrondrosarcoma Compounds
;  FILE REFERENCE: 1443.064US1
;  CURRENT APPLICATION NUMBER: US/10/601,059
;  CURRENT FILING DATE:  2003-06-20
;  PRIOR APPLICATION NUMBER: US 10/335,207
;  PRIOR FILING DATE: 2002-12-30
;  PRIOR APPLICATION NUMBER: US 10/219,329
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: PCT/US02/26319
;  PRIOR FILING DATE: 2002-08-15
;  PRIOR APPLICATION NUMBER: US 10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-601-059-14

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 46
US-10-872-198-131
; Sequence 131, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
;  APPLICANT: Ulrich HAUPTS
;  APPLICANT:  Andre KOLTERMANN
;  APPLICANT:  Andreas SCHEIDIG
;  APPLICANT:  Christian VOETSMEIER
;  APPLICANT:  Ulrich Kettling
;  TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
;  FILE REFERENCE: 04156.0002U4
;  CURRENT APPLICATION NUMBER: US/10/872,198
;  CURRENT FILING DATE:  2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 149
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-872-198-131

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 47
US-10-901-417-25
; Sequence 25, Application US/10901417
; Publication No. US20050026836A1
; GENERAL INFORMATION:
;  APPLICANT: Dack, Kevin N
;  APPLICANT:  Davies, Michael J
;  APPLICANT:  Fish, Paul V
;  APPLICANT:  Huggins, Jonathan P
;  APPLICANT:  McIntosh, Fraser S
;  APPLICANT:  Occleston, Nicholas L
;  TITLE OF INVENTION: Composition
;  FILE REFERENCE: PCS 10391A
;  CURRENT APPLICATION NUMBER: US/10/901,417
;  CURRENT FILING DATE:  2004-07-28
;  PRIOR APPLICATION NUMBER: US/10/131,985
;  PRIOR FILING DATE: 2002-04-25
;  PRIOR APPLICATION NUMBER: US/09/726,295
;  PRIOR FILING DATE: 2000-11-30
;  PRIOR APPLICATION NUMBER: GB 9930768.8
;  PRIOR FILING DATE: 1999-12-29
;  NUMBER OF SEQ ID NOS: 60
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 25
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-901-417-25

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 48
US-10-979-159-208
; Sequence 208, Application US/10979159
; Publication No. US20050142138A1
; GENERAL INFORMATION:
;  APPLICANT: Brad St. Croix
;  APPLICANT:  Bert Vogelstein
;  APPLICANT:  Kenneth Kinzler
;  TITLE OF INVENTION: ENDOTHELIAL CELL EXPRESSION PATTERNS
```

```
;  FILE REFERENCE: 1107.00134
;  CURRENT APPLICATION NUMBER: US/10/979,159
;  CURRENT FILING DATE:  2004-11-03
;  PRIOR APPLICATION NUMBER: US/09/918,715
;  PRIOR FILING DATE: 2001-08-01
;  PRIOR APPLICATION NUMBER: 60/222,599
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: 60/224,360
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: 60/282,850
;  PRIOR FILING DATE: 2000-04-11
;  NUMBER OF SEQ ID NOS: 358
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 208
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-979-159-208

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 49
US-10-287-436A-489
; Sequence 489, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 489
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-489

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 50
US-10-287-436A-1185
; Sequence 1185, Application US/10287436A
; Publication No. US20050202421A1
; GENERAL INFORMATION:
;  APPLICANT: CHILDREN'S HOSPITAL MEDICAL CENTER
;  TITLE OF INVENTION: METHOD FOR DIAGNOSIS AND TREATMENT OF
;  TITLE OF INVENTION:  RHEUMATOID ARTHRITIS
;  FILE REFERENCE: 10872.514696
;  CURRENT APPLICATION NUMBER: US/10/287,436A
;  CURRENT FILING DATE:  2002-10-31
;  PRIOR APPLICATION NUMBER: US 60/336,220
;  PRIOR FILING DATE: 2001-10-31
;  NUMBER OF SEQ ID NOS: 1446
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1185
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-287-436A-1185

  Query Match             100.0%;  Score 60;  DB 5;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 51
US-11-021-951-131
; Sequence 131, Application US/11021951
; Publication No. US20050175581A1
; GENERAL INFORMATION:
;  APPLICANT: HAUPTS, Ulrich
;  APPLICANT:  KOLTERMANN, Andre
;  APPLICANT:  SCHEIDIG, Andreas
;  APPLICANT:  VOTSMEIER, Christian
;  APPLICANT:  Kettling, Ulrich
;  APPLICANT:  COCO, Wayne Michael
;  TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
;  TITLE OF INVENTION:  And Diagnostic Use Thereof
;  FILE REFERENCE: 04156.0002U5
;  CURRENT APPLICATION NUMBER: US/11/021,951
;  CURRENT FILING DATE:  2004-12-22
;  PRIOR APPLICATION NUMBER: 10/872,198
;  PRIOR FILING DATE: 2004-06-18
;  PRIOR APPLICATION NUMBER: 60/543,518
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: 60/524,960
;  PRIOR FILING DATE: 2003-11-25
;  PRIOR APPLICATION NUMBER: EP 04003058
;  PRIOR FILING DATE: 2004-02-11
;  PRIOR APPLICATION NUMBER: EP 03025871
;  PRIOR FILING DATE: 2003-11-11
;  PRIOR APPLICATION NUMBER: EP 03025851
;  PRIOR FILING DATE: 2003-11-10
;  PRIOR APPLICATION NUMBER: EP 03013819
;  PRIOR FILING DATE: 2003-06-18
;  NUMBER OF SEQ ID NOS: 191
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 131
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-021-951-131

  Query Match             100.0%;  Score 60;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 52
US-11-031-488-14
; Sequence 14, Application US/11031488
; Publication No. US20050239710A1
; GENERAL INFORMATION:
;  APPLICANT: Quirk, Stephen
;  APPLICANT:  Malik, Sohail
;  TITLE OF INVENTION: Anti-Aging and Wound Healing Compounds
;  FILE REFERENCE: 1443.034US1
;  CURRENT APPLICATION NUMBER: US/11/031,488
;  CURRENT FILING DATE:  2005-01-07
```

```
;  PRIOR APPLICATION NUMBER: US/10/153,185
;  PRIOR FILING DATE: 2002-05-21
;  PRIOR APPLICATION NUMBER: US 10/032,376
;  PRIOR FILING DATE: 2001-12-21
;  PRIOR APPLICATION NUMBER: US 60/312,726
;  PRIOR FILING DATE: 2001-08-16
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 660
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-031-488-14

  Query Match             100.0%;  Score 60;  DB 6;  Length 660;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118


RESULT 53
US-10-115-223-30
; Sequence 30, Application US/10115223
; Publication No. US20030176334A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter
;  APPLICANT:  Cheresh, David A.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS USEFUL FOR INHIBITION OF
;  TITLE OF INVENTION:  ANGIOGENESIS
;  FILE REFERENCE: MER0049S
;  CURRENT APPLICATION NUMBER: US/10/115,223
;  CURRENT FILING DATE:  2002-04-02
;  PRIOR APPLICATION NUMBER: US/09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,896
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  NUMBER OF SEQ ID NOS: 45
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-115-223-30

  Query Match             100.0%;  Score 60;  DB 4;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 54
US-10-402-212-30
; Sequence 30, Application US/10402212
; Publication No. US20040063790A1
; GENERAL INFORMATION:
;  APPLICANT: Brooks, Peter C.
;  APPLICANT:  Cheresh, David A.
;  APPLICANT:  Silletti, Steven A.
;  APPLICANT:  The Scripps Research Institute
;  TITLE OF INVENTION: METHODS FOR INHIBITION OF ANGIOGENESIS
;  FILE REFERENCE: TSRI-419.3
;  CURRENT APPLICATION NUMBER: US/10/402,212
;  CURRENT FILING DATE:  2003-03-28
;  PRIOR APPLICATION NUMBER: 10/115,223
;  PRIOR FILING DATE: 2002-04-02
;  PRIOR APPLICATION NUMBER: 09/194,468
;  PRIOR FILING DATE: 1999-03-23
;  PRIOR APPLICATION NUMBER: PCT/US97/09158
;  PRIOR FILING DATE: 1997-05-30
;  PRIOR APPLICATION NUMBER: 60/018,773
;  PRIOR FILING DATE: 1996-05-31
;  PRIOR APPLICATION NUMBER: 60/015,869
;  PRIOR FILING DATE: 1996-05-31
;  NUMBER OF SEQ ID NOS: 47
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 30
;   LENGTH: 663
;   TYPE: PRT
;   ORGANISM: Gallus gallus
US-10-402-212-30

  Query Match             100.0%;  Score 60;  DB 4;  Length 663;
  Best Local Similarity   100.0%;  Pred. No. 0.21;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        106 NYNFFPRKPK 115


RESULT 55
US-10-450-763-54358
; Sequence 54358, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
;  APPLICANT: Hyseq, Inc
;  TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
;  FILE REFERENCE: 790CIP3/US
;  CURRENT APPLICATION NUMBER: US/10/450,763
;  CURRENT FILING DATE:  2003-06-11
;  PRIOR APPLICATION NUMBER: PCT/US01/08631
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: 09/540,217
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: 09/649,167
;  PRIOR FILING DATE: 2000-08-23
;  NUMBER OF SEQ ID NOS: 60736
;  SOFTWARE: Custom
; SEQ ID NO 54358
;   LENGTH: 1330
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (579)..(616)
;   OTHER INFORMATION: Type II fibronectin collagen-binding domain proteins domain
;   OTHER INFORMATION: identified by eMATRIX, accession number BL00023, p-value=4.682e-3
;   OTHER INFORMATION: raw score of 24.31
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (271)..(451)
;   OTHER INFORMATION: Matrixin domain identified by PFam, accession name
;   OTHER INFORMATION: Peptidase_M10, E-value=3.7e-109, PFam score of 376.1
US-10-450-763-54358

  Query Match             100.0%;  Score 60;  DB 5;  Length 1330;
  Best Local Similarity   100.0%;  Pred. No. 0.42;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        327 NYNFFPRKPK 336


Search completed: February 21, 2006, 18:35:36
Job time : 76.8421 secs
```



This Page Blank (uspto)

OM protein - protein search, using sw model

Run on: February 21, 2006, 08:21:13 ; Search time 6.57895 Seconds
(without alignments)
21.644 Million cell updates/sec

Title: US-10-601-059-13
Perfect score: 60
Sequence: 1 NYNFFPRKPK 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 108093 seqs, 14239677 residues

Total number of hits satisfying chosen parameters: 108093

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_New:*
1: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	60	100.0	660	7	US-11-186-284-125	Sequence 125, App
2	60	100.0	708	6	US-10-821-234-917	Sequence 917, App
3	37	61.7	198	6	US-10-793-626-1572	Sequence 1572, Ap
4	37	61.7	483	7	US-11-037-243-79	Sequence 79, Appl
5	36	60.0	71	6	US-10-467-657-8637	Sequence 8637, Ap
6	36	60.0	1360	7	US-11-188-743-22	Sequence 22, Appl
7	36	60.0	1360	7	US-11-183-294-26	Sequence 26, Appl
8	35	58.3	559	6	US-10-821-234-947	Sequence 947, App
9	35	58.3	713	7	US-11-072-512-2818	Sequence 2818, Ap
10	34	56.7	15	6	US-10-718-264-105	Sequence 105, App
11	34	56.7	15	6	US-10-718-264-106	Sequence 106, App
12	34	56.7	15	6	US-10-718-264-105	Sequence 105, App
13	34	56.7	15	6	US-10-718-264-106	Sequence 106, App
14	34	56.7	21	6	US-10-895-064-1953	Sequence 1953, Ap
15	34	56.7	108	7	US-11-049-536-244	Sequence 244, App
16	34	56.7	231	7	US-11-107-219-6	Sequence 6, Appli
17	34	56.7	233	6	US-10-718-264-12	Sequence 12, Appl
18	34	56.7	233	6	US-10-718-264-167	Sequence 167, App
19	34	56.7	233	6	US-10-718-264-168	Sequence 168, App
20	34	56.7	233	6	US-10-718-264-12	Sequence 12, Appl
21	34	56.7	233	6	US-10-718-264-167	Sequence 167, App
22	34	56.7	233	6	US-10-718-264-168	Sequence 168, App
23	34	56.7	233	7	US-11-217-562-6	Sequence 6, Appli
24	34	56.7	795	6	US-10-821-234-1002	Sequence 1002, Ap
25	33	55.0	20	6	US-10-485-788A-583	Sequence 583, App
26	33	55.0	64	6	US-10-467-657-9117	Sequence 9117, Ap
27	33	55.0	252	7	US-11-098-686-10372	Sequence 10372, A
28	33	55.0	265	6	US-10-793-626-2500	Sequence 2500, Ap
29	33	55.0	267	6	US-10-995-561-542	Sequence 542, App
30	33	55.0	267	7	US-11-186-284-129	Sequence 129, App
31	33	55.0	318	7	US-11-098-686-10543	Sequence 10543, A
32	33	55.0	756	7	US-11-113-837-20	Sequence 20, Appl
33	33	55.0	1783	7	US-11-126-313-38	Sequence 38, Appl
34	32	53.3	45	6	US-10-689-742-168	Sequence 168, App
35	32	53.3	105	6	US-10-834-397-166	Sequence 166, App
36	32	53.3	106	7	US-11-144-248-26	Sequence 26, Appl
37	32	53.3	106	7	US-11-024-251-29	Sequence 29, Appl
38	32	53.3	106	7	US-11-165-141-17	Sequence 17, Appl
39	32	53.3	106	7	US-11-144-222-26	Sequence 26, Appl
40	32	53.3	106	7	US-11-005-726-165	Sequence 165, App
41	32	53.3	106	7	US-11-182-343-26	Sequence 26, Appl
42	32	53.3	107	6	US-10-999-866-40	Sequence 40, Appl
43	32	53.3	107	6	US-10-886-383-8	Sequence 8, Appli
44	32	53.3	107	6	US-10-988-207-21	Sequence 21, Appl
45	32	53.3	107	6	US-10-982-440-67	Sequence 67, Appl

ALIGNMENTS

RESULT 1
US-11-186-284-125
; Sequence 125, Application US/11186284
; Publication No. US20050266493A1
; GENERAL INFORMATION:
; APPLICANT: Millennium Pharmaceuticals, Inc.
; APPLICANT: Berger, Allison
; APPLICANT: Guillemette, Tracy L.
; APPLICANT: Kamatkar, Shubhangi
; APPLICANT: Schlegel, Robert
; APPLICANT: Monahan, John E.
; APPLICANT: Thibodeau, Stephen N.
; APPLICANT: Burgart, Lawrence J.
; TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
; TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
; TITLE OF INVENTION: THERAPY OF COLON CANCER
; FILE REFERENCE: MPM01-029P2RNM
; CURRENT APPLICATION NUMBER: US/11/186,284
; CURRENT FILING DATE: 2005-07-21
; PRIOR APPLICATION NUMBER: US/10/301,822
; PRIOR FILING DATE: 2002-11-21
; PRIOR APPLICATION NUMBER: US 60/339,971
; PRIOR FILING DATE: 2001-12-10
; PRIOR APPLICATION NUMBER: US 60/361,978
; PRIOR FILING DATE: 2002-03-05
; PRIOR APPLICATION NUMBER: US 60/381,988
; PRIOR FILING DATE: 2002-05-20
; NUMBER OF SEQ ID NOS: 228
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 125
; LENGTH: 660
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-11-186-284-125

Query Match 100.0%; Score 60; DB 7; Length 660;
Best Local Similarity 100.0%; Pred. No. 0.0034;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        109 NYNFFPRKPK 118
```

RESULT 2
US-10-821-234-917
; Sequence 917, Application US/10821234
; Publication No. US20050255114A1

```
; GENERAL INFORMATION:
;  APPLICANT: Labat, Ivan
;  APPLICANT:  Stache-Crain, Birgit
;  APPLICANT:  Andarmani, Susan
;  APPLICANT:  Tang, Y. Tom
;  TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
;  FILE REFERENCE: 821A
;  CURRENT APPLICATION NUMBER: US/10/821,234
;  CURRENT FILING DATE:  2004-04-07
;  PRIOR APPLICATION NUMBER: US 60/462,047
;  PRIOR FILING DATE: 2003-04-07
;  NUMBER OF SEQ ID NOS: 1704
;  SOFTWARE: pt_SEQ_genes Version 1.0
; SEQ ID NO 917
;   LENGTH: 708
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-821-234-917

  Query Match            100.0%;  Score 60;  DB 6;  Length 708;
  Best Local Similarity   100.0%;  Pred. No. 0.0037;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||||||||||
Db        157 NYNFFPRKPK 166


RESULT 3
US-10-793-626-1572
; Sequence 1572, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
;  APPLICANT: KIMMERLY, WILLIAM JOHN
;  TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
;  FILE REFERENCE: PU3480US
;  CURRENT APPLICATION NUMBER: US/10/793,626
;  CURRENT FILING DATE:  2004-03-04
;  PRIOR APPLICATION NUMBER: 60/164,258
;  PRIOR FILING DATE: 1999-11-09
;  NUMBER OF SEQ ID NOS: 4472
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1572
;   LENGTH: 198
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: amino acid sequence
US-10-793-626-1572

  Query Match            61.7%;  Score 37;  DB 6;  Length 198;
  Best Local Similarity   75.0%;  Pred. No. 9.9;
  Matches    6;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRK 8
              ||| || |
Db         41 NYNLFPHK 48


RESULT 4
US-11-037-243-79
; Sequence 79, Application US/11037243
; Publication No. US20050287546A1
; GENERAL INFORMATION:
;  APPLICANT: PLOWMAN, GREGORY
;  APPLICANT:  WHYTE, DAVID
;  APPLICANT:  CAENEPEEL, SEAN
;  APPLICANT:  CHARYDCZAK, GLEN
;  APPLICANT:  MANNING, GERARD
;  APPLICANT:  SUDARSANAM, SUCHA
;  TITLE OF INVENTION: NOVEL PROTEASES
;  FILE REFERENCE: 038602/1214
;  CURRENT APPLICATION NUMBER: US/11/037,243
;  CURRENT FILING DATE:  2005-05-26
;  PRIOR APPLICATION NUMBER: US/09/888,615
;  PRIOR FILING DATE: 2001-06-26
;  PRIOR APPLICATION NUMBER: 60/214,047
;  PRIOR FILING DATE: 2000-06-26
;  NUMBER OF SEQ ID NOS: 150
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 79
;   LENGTH: 483
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-11-037-243-79

  Query Match            61.7%;  Score 37;  DB 7;  Length 483;
  Best Local Similarity   60.0%;  Pred. No. 24;
  Matches    6;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              ||  || :||
Db        107 NYRLFPGEPK 116


RESULT 5
US-10-467-657-8637
; Sequence 8637, Application US/10467657
; Publication No. US20050260581A1
; GENERAL INFORMATION:
;  APPLICANT: CHIRON SpA
;  APPLICANT: FONTANA Maria Rita
;  APPLICANT: PIZZA Mariagrazia
;  APPLICANT: MASIGNANI Vega
;  APPLICANT: MONACI Elisabetta
;  TITLE OF INVENTION: GONOCOCCAL PROTEINS AND NUCLEIC ACIDS
;  FILE REFERENCE:
;  CURRENT APPLICATION NUMBER: US/10/467,657
;  CURRENT FILING DATE:  2003-08-11
;  PRIOR APPLICATION NUMBER: GB-0103424.8
;  PRIOR FILING DATE: 2001-02-12
;  NUMBER OF SEQ ID NOS: 9218
;  SOFTWARE: SeqWin99, version 1.04
; SEQ ID NO 8637
;   LENGTH: 71
;   TYPE: PRT
;   ORGANISM: Neisseria gonorrhoeae
US-10-467-657-8637

  Query Match            60.0%;  Score 36;  DB 6;  Length 71;
  Best Local Similarity   50.0%;  Pred. No. 5.4;
  Matches    5;  Conservative    3;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 NYNFFPRKPK 10
              |::|||  |:
Db         25 NFSFFPHLPR 34


RESULT 6
US-11-188-743-22
; Sequence 22, Application US/11188743
; Publication No. US20050272140A1
; GENERAL INFORMATION:
;  APPLICANT: Nicolaides, Nicholas
;  APPLICANT:  Sass, Philip
;  APPLICANT:  Kinzler, Kenneth
;  APPLICANT:  Grasso, Luigi
;  APPLICANT:  Vogelstein, Bert
;  TITLE OF INVENTION: Methods for generating hypermutable
;  TITLE OF INVENTION:  yeast
;  FILE REFERENCE: 01107.00097
;  CURRENT APPLICATION NUMBER: US/11/188,743
;  CURRENT FILING DATE:  2005-07-26
;  PRIOR APPLICATION NUMBER: US/10/641,068
;  PRIOR FILING DATE: 2003-08-15
```

; PRIOR APPLICATION NUMBER: US/09/788,657
; PRIOR FILING DATE: 2001-02-21
; PRIOR APPLICATION NUMBER: 60/184,336
; PRIOR FILING DATE: 2000-02-23
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: PastSEQ for Windows Version 3.0
; SEQ ID NO 22
; LENGTH: 1360
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-188-743-22

Query Match 60.0%; Score 36; DB 7; Length 1360;
Best Local Similarity 62.5%; Pred. No. 98;
Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 2 YNFFPRKP 9
:|:||: |
Db 8 YSFFPKSP 15

RESULT 7
US-11-183-294-26
; Sequence 26, Application US/11183294
; Publication No. US20060019383A1
; GENERAL INFORMATION:
; APPLICANT: Nicolaides, Nicholas C.
; APPLICANT: Grasso, Luigi
; APPLICANT: Sass, Philip M.
; TITLE OF INVENTION: CHEMICAL INHIBITORS OF MISMATCH REPAIR
; FILE REFERENCE: MOR-0475
; CURRENT APPLICATION NUMBER: US/11/183,294
; CURRENT FILING DATE: 2005-07-15
; PRIOR APPLICATION NUMBER: US 09/760,285
; PRIOR FILING DATE: 2001-01-15
; NUMBER OF SEQ ID NOS: 44
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 26
; LENGTH: 1360
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-183-294-26

Query Match 60.0%; Score 36; DB 7; Length 1360;
Best Local Similarity 62.5%; Pred. No. 98;
Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 2 YNFFPRKP 9
:|:||: |
Db 8 YSFFPKSP 15

RESULT 8
US-10-821-234-947
; Sequence 947, Application US/10821234
; Publication No. US20050255114A1
; GENERAL INFORMATION:
; APPLICANT: Labat, Ivan
; APPLICANT: Stache-Crain, Birgit
; APPLICANT: Andarmani, Susan
; APPLICANT: Tang, Y. Tom
; TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
; FILE REFERENCE: 821A
; CURRENT APPLICATION NUMBER: US/10/821,234
; CURRENT FILING DATE: 2004-04-07
; PRIOR APPLICATION NUMBER: US 60/462,047
; PRIOR FILING DATE: 2003-04-07
; NUMBER OF SEQ ID NOS: 1704
; SOFTWARE: pt_SEQ_genes Version 1.0
; SEQ ID NO 947
; LENGTH: 559
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-821-234-947

Query Match 58.3%; Score 35; DB 6; Length 559;
Best Local Similarity 62.5%; Pred. No. 61;
Matches 5; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 2 YNFFPRKP 9
:|||| |
Db 120 FNFFPENP 127

RESULT 9
US-11-072-512-2818
; Sequence 2818, Application US/11072512
; Publication No. US20060029945A1
; GENERAL INFORMATION:
; APPLICANT: ISOGAI, TAKAO
; APPLICANT: SUGIYAMA, TOMOYASU
; APPLICANT: OTSUKI, TETSUJI
; APPLICANT: WAKAMATSU, AI
; APPLICANT: SATO, HIROYUKI
; APPLICANT: ISHII, SHIZUKO
; APPLICANT: YAMAMOTO, JUN-ICHI
; APPLICANT: ISONO, YUUKO
; APPLICANT: HIO, YURI
; APPLICANT: OTSUKA, KAORU
; APPLICANT: NAGAI, KEIICHI
; APPLICANT: IRIE, RYOTARO
; APPLICANT: TAMECHIKA, ICHIRO
; APPLICANT: SEKI, NAOHIKO
; APPLICANT: YOSHIKAWA, TSUTOMU
; APPLICANT: OTSUKA, MOTOYUKI
; APPLICANT: NAGAHARI, KENJI
; APPLICANT: MASUHO, YASUHIKO
; TITLE OF INVENTION: Novel full length cDNA
; FILE REFERENCE: 084335-0191
; CURRENT APPLICATION NUMBER: US/11/072,512
; CURRENT FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: US 60/350,978
; PRIOR FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: JP 2001-379298
; PRIOR FILING DATE: 2001-11-05
; NUMBER OF SEQ ID NOS: 4096
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2818
; LENGTH: 713
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-072-512-2818

Query Match 58.3%; Score 35; DB 7; Length 713;
Best Local Similarity 75.0%; Pred. No. 77;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 3 NFFPRKPK 10
| ||:|||
Db 77 NNFPKKPK 84

RESULT 10
US-10-718-264-105
; Sequence 105, Application US/10718264
; Publication No. US20040161410A1
; GENERAL INFORMATION:
; APPLICANT: JESTIN, Andre
; APPLICANT: ALBINA, Emanuel
; APPLICANT: Le CANN, Pierre
; APPLICANT: BLANCHARD, Phillipe
; APPLICANT: HUTET, Evelyne
; APPLICANT: ARNAULD, Claire
; APPLICANT: TRUONG, Catherine
; APPLICANT: MAHE, Dominique
; APPLICANT: CARIOLET, Roland

```
;  APPLICANT:  MADEC, Francois
;  TITLE OF INVENTION: CIRCOVIRUS SEQUENCES ASSOCIATED WITH PIGLET WEIGHT LOSS
;  TITLE OF INVENTION:  DISEASE (PWD)
;  FILE REFERENCE: 065691/0176
;  CURRENT APPLICATION NUMBER: US/10/718,264
;  CURRENT FILING DATE:  2003-11-21
;  PRIOR APPLICATION NUMBER: US/09/514,245B
;  PRIOR FILING DATE: 2000-02-28
;  PRIOR APPLICATION NUMBER: FR 97/15396
;  PRIOR FILING DATE: 1997-12-05
;  NUMBER OF SEQ ID NOS: 170
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 105
;   LENGTH: 15
;   TYPE: PRT
;   ORGANISM: Type A PWD circovirus
US-10-718-264-105

  Query Match             56.7%;  Score 34;  DB 6;  Length 15;
  Best Local Similarity   62.5%;  Pred. No. 2.6;
  Matches    5;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKP 9
              | |:|| |
Db          8 YEFYPRDP 15


RESULT 11
US-10-718-264-106
; Sequence 106, Application US/10718264
; Publication No. US20040161410A1
; GENERAL INFORMATION:
;  APPLICANT: JESTIN, Andre
;  APPLICANT:  ALBINA, Emanuel
;  APPLICANT:  Le CANN, Pierre
;  APPLICANT:  BLANCHARD, Phillipe
;  APPLICANT:  HUTET, Evelyne
;  APPLICANT:  ARNAULD, Claire
;  APPLICANT:  TRUONG, Catherine
;  APPLICANT:  MAHE, Dominique
;  APPLICANT:  CARIOLET, Roland
;  APPLICANT:  MADEC, Francois
;  TITLE OF INVENTION: CIRCOVIRUS SEQUENCES ASSOCIATED WITH PIGLET WEIGHT LOSS
;  TITLE OF INVENTION:  DISEASE (PWD)
;  FILE REFERENCE: 065691/0176
;  CURRENT APPLICATION NUMBER: US/10/718,264
;  CURRENT FILING DATE:  2003-11-21
;  PRIOR APPLICATION NUMBER: US/09/514,245B
;  PRIOR FILING DATE: 2000-02-28
;  PRIOR APPLICATION NUMBER: FR 97/15396
;  PRIOR FILING DATE: 1997-12-05
;  NUMBER OF SEQ ID NOS: 170
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 106
;   LENGTH: 15
;   TYPE: PRT
;   ORGANISM: Type A PWD circovirus
US-10-718-264-106

  Query Match             56.7%;  Score 34;  DB 6;  Length 15;
  Best Local Similarity   62.5%;  Pred. No. 2.6;
  Matches    5;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKP 9
              | |:|| |
Db          4 YEFYPRDP 11


RESULT 12
US-10-718-264-105
; Sequence 105, Application US/10718264
; Publication No. US20040161410A1
; GENERAL INFORMATION:
;  APPLICANT: JESTIN, Andre
;  APPLICANT:  ALBINA, Emanuel
;  APPLICANT:  Le CANN, Pierre
;  APPLICANT:  BLANCHARD, Phillipe
;  APPLICANT:  HUTET, Evelyne
;  APPLICANT:  ARNAULD, Claire
;  APPLICANT:  TRUONG, Catherine
;  APPLICANT:  MAHE, Dominique
;  APPLICANT:  CARIOLET, Roland
;  APPLICANT:  MADEC, Francois
;  TITLE OF INVENTION: CIRCOVIRUS SEQUENCES ASSOCIATED WITH PIGLET WEIGHT LOSS
;  TITLE OF INVENTION:  DISEASE (PWD)
;  FILE REFERENCE: 065691/0176
;  CURRENT APPLICATION NUMBER: US/10/718,264
;  CURRENT FILING DATE:  2003-11-21
;  PRIOR APPLICATION NUMBER: US/09/514,245B
;  PRIOR FILING DATE: 2000-02-28
;  PRIOR APPLICATION NUMBER: FR 97/15396
;  PRIOR FILING DATE: 1997-12-05
;  NUMBER OF SEQ ID NOS: 170
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 105
;   LENGTH: 15
;   TYPE: PRT
;   ORGANISM: Type A PWD circovirus
US-10-718-264-105

  Query Match             56.7%;  Score 34;  DB 6;  Length 15;
  Best Local Similarity   62.5%;  Pred. No. 2.6;
  Matches    5;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKP 9
              | |:|| |
Db          8 YEFYPRDP 15


RESULT 13
US-10-718-264-106
; Sequence 106, Application US/10718264
; Publication No. US20040161410A1
; GENERAL INFORMATION:
;  APPLICANT: JESTIN, Andre
;  APPLICANT:  ALBINA, Emanuel
;  APPLICANT:  Le CANN, Pierre
;  APPLICANT:  BLANCHARD, Phillipe
;  APPLICANT:  HUTET, Evelyne
;  APPLICANT:  ARNAULD, Claire
;  APPLICANT:  TRUONG, Catherine
;  APPLICANT:  MAHE, Dominique
;  APPLICANT:  CARIOLET, Roland
;  APPLICANT:  MADEC, Francois
;  TITLE OF INVENTION: CIRCOVIRUS SEQUENCES ASSOCIATED WITH PIGLET WEIGHT LOSS
;  TITLE OF INVENTION:  DISEASE (PWD)
;  FILE REFERENCE: 065691/0176
;  CURRENT APPLICATION NUMBER: US/10/718,264
;  CURRENT FILING DATE:  2003-11-21
;  PRIOR APPLICATION NUMBER: US/09/514,245B
;  PRIOR FILING DATE: 2000-02-28
;  PRIOR APPLICATION NUMBER: FR 97/15396
;  PRIOR FILING DATE: 1997-12-05
;  NUMBER OF SEQ ID NOS: 170
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 106
;   LENGTH: 15
;   TYPE: PRT
;   ORGANISM: Type A PWD circovirus
US-10-718-264-106

  Query Match             56.7%;  Score 34;  DB 6;  Length 15;
  Best Local Similarity   62.5%;  Pred. No. 2.6;
  Matches    5;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKP 9
```

```
              | |:|| |
Db          4 YEFYPRDP 11


RESULT 14
US-10-895-064-1953
; Sequence 1953, Application US/10895064
; Publication No. US20060018923A1
; GENERAL INFORMATION:
;  APPLICANT: PEIRIS, JOSEPH S.M.
;  APPLICANT:  YUEN, KWOK YUNG
;  APPLICANT:  POON, LIT MAN
;  APPLICANT:  GUAN, YI
;  APPLICANT:  CHAN, KWOK HUNG
;  APPLICANT:  NICHOLLS, JOHN M.
;  APPLICANT:  LEUNG, FREDERICK C.
;  TITLE OF INVENTION: A NOVEL HUMAN VIRUS CAUSING RESPIRATORY TRACT INFECTION AND USES
;  TITLE OF INVENTION:  THEREOF
;  FILE REFERENCE: V0690.0031
;  CURRENT APPLICATION NUMBER: US/10/895,064
;  CURRENT FILING DATE:  2004-07-21
;  NUMBER OF SEQ ID NOS: 2918
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1953
;   LENGTH: 21
;   TYPE: PRT
;   ORGANISM: Corononavirus-HKU1
US-10-895-064-1953

  Query Match             56.7%;  Score 34;  DB 6;  Length 21;
  Best Local Similarity   66.7%;  Pred. No. 3.6;
  Matches    6;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 YNFFPRKPK 10
              | |: ||||
Db         11 YLFYKRKPK 19


RESULT 15
US-11-049-536-244
; Sequence 244, Application US/11049536
; Publication No. US20060024297A1
; GENERAL INFORMATION:
;  APPLICANT: Wood, Clive R.
;  APPLICANT:  Dransfield,  Daniel T.
;  APPLICANT:  Pieters, Henk
;  APPLICANT:  Hoet, Rene
;  APPLICANT:  Hufton, Simon E.
;  TITLE OF INVENTION: TIE COMPLEX BINDING PROTEINS
;  FILE REFERENCE: 10280-128001
;  CURRENT APPLICATION NUMBER: US/11/049,536
;  CURRENT FILING DATE:  2005-02-02
;  PRIOR APPLICATION NUMBER: US 10/916,840
;  PRIOR FILING DATE: 2004-08-12
;  PRIOR APPLICATION NUMBER: US 60/494,713
;  PRIOR FILING DATE: 2003-08-12
;  NUMBER OF SEQ ID NOS: 721
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 244
;   LENGTH: 108
;   TYPE: PRT
;   ORGANISM: ARTIFICIAL SEQUENCE
;   FEATURE:
;   OTHER INFORMATION: Antibody
US-11-049-536-244

  Query Match             56.7%;  Score 34;  DB 7;  Length 108;
  Best Local Similarity   83.3%;  Pred. No. 18;
  Matches    5;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 YNFFPR 7
              |||:||
Db         92 YNFYPR 97
```

Search completed: February 21, 2006, 08:26:29
Job time : 6.57895 secs